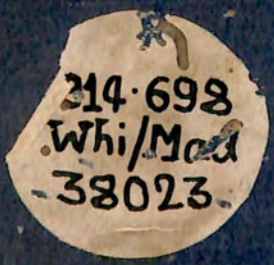
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Funchal, from above Saĉ Gonsalves

MADEIRA,

ITS CLIMATE AND SCENERY

CONTAINING MEDICAL AND GENERAL INFORMATION
FOR INVALIDS AND VISITORS; A TOUR OF THE ISLAND, ETC.;
AND AN APPENDIX.

BY ROBERT WHITE

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Illustrated with Engravings, from Sketches taken on the Spot by JOHN BOTCHERBY, *Esq.*
and a Map of the Island.

LONDON: CRADOCK & CO. PATERNOSTER ROW;
AND F. WILKINSON & CO. MADEIRA.
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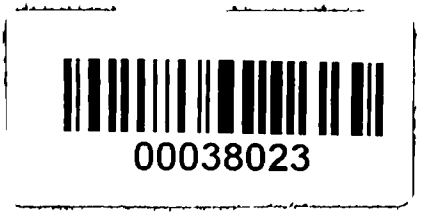

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PREFACE.

THE following notes have been prepared at the suggestion of a few friends, who have flattered the author by considering him fitted, from his long sojourn on the island, to furnish such information as would be useful to strangers, and especially invalids, resorting to Madeira.

The want of such information has often been regretted by visitors, and certainly none of the works hitherto published on the subject are at all calculated to supply this desideratum.

The author has here endeavoured to furnish all the information which an experience of upwards of fifteen years' residence on the island has taught him to be necessary for the visitor. He has also attempted to supply such details regarding the climate of Madeira as might be interesting and useful to many, and especially to those who

are meditating a change, from the trying cold of England, to a mild and purer atmosphere, or who may be interested in selecting an eligible winter resort for others.

Without pretending to medical knowledge, the author has given his own experience of the climate, and the results of some meteorological observations made by himself, which he has endeavoured to condense as much as possible, with a due regard to correctness, from a series of daily observations. He has availed himself of the kind assistance of resident English medical practitioners in pointing out the beneficial effects of the climate in the cure or amelioration of disease; and begs to express his peculiar obligations to Drs. Lund and Tibbetts, for their valuable information. The medical instructions for invalids during the voyage will be fully appreciated by that class of visitors.

The description of the different kinds of grapes and wines produced on the island, may be relied upon as correct; for information on these, the writer has to acknowledge his obligations to William Grant, Esq., whose long experience and excellent practical knowledge as a wine-merchant and cultivator of the grape, are well known in Madeira.

An additional and important interest has been imparted to the work by the kindness of John Botcherby, Esq., who has furnished the excellent and accurate sketches from which the illustrations have been taken.

Considerable pains have been bestowed on the commercial and statistical information contained in the work; and it is hoped the explanation of the monies, weights, and measures of the island will be found useful, as great confusion prevails on these points in all the works hitherto published descriptive of Madeira.

To lovers of natural scenery the excursions in Madeira are peculiarly interesting; and as such journeys are often undertaken by invalids, to vary the monotony of a residence in Funchal or its neighbourhood, a plan has been given of a tour through the island, and such practical hints as the author knows from experience will be useful. The distances have all been carefully ascertained, and are given in a tabular form—not in miles, as the nature of the roads renders such information of no use to the tourist; but—in the time required in passing from one point to another, at the usual pace on horseback, in hammocks, or by boat. Parties are usually accompanied by attendants in

these excursions, to look after the horses, &c., but as few of them understand English, they are of little use as guides.

Besides wishing to record his own grateful experience of a residence in Madeira, to which he feels that he owes many years' prolongation of life, and the enjoyment of comparative health, the writer hopes this little work may be of real utility to others similarly circumstanced with himself.

MADEIRA, 1850.

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A NEW MAP
OF
THE ISLAND OF MADEIRA.

MADEIRA.

CHAPTER I.

HISTORY OF THE DISCOVERY OF MADEIRA—GENERAL APPEARANCE OF THE ISLAND—HISTORY—POPULATION, ETC.

It appears doubtful whether the islands of Madeira and Porto Santo were not known to the early Phœnicians, who, by order of Pharaoh Necho, sailed from the Red Sea round Africa, and returned by the Pillars of Hercules, 607 B.C., and frequently (at a later period), with the Carthaginians, visited the north-west coast of Africa beyond Cape Bojador.

Herodotus, whom Cicero has called the Father of History, mentions the "Islands of the Blessed," situated on the confines of the earth, in an ocean warmed by the rays of the near-setting sun: and Plutarch asserts, that Sartorius, when driven from Spain, wished to save himself and his attendants, after the loss of his fleet, on a group of two Atlantic islands, ten thousand stadia to the west of the mouth of the Bætis. It has been supposed

that he meant to designate the two islands of Porto Santo and Madeira, which were already indicated by Pliny as the Purpurariæ.[1]

The romantic and probably fabulous narrative of the discovery of Madeira, in 1344, by Robert Machin and his run-away bride, which has been inserted in nearly all the works hitherto published, descriptive of the island, need not be repeated here.

According to the most authentic modern accounts, Madeira was discovered during the most brilliant century of Portuguese history, by Joaõ Gonsalves da Camara, commonly called Zargo,[2] and Tristaõ Vaz Taxeira, under the auspices of Dom Henry, "the Conquistador," son of King John I. of Portugal, in July, 1419; and so named from its being clothed in the richest forest verdure.[3]

Porto Santo, a small island lying about fifty miles to the north-east of Madeira, had been accidentally discovered during the previous year by Bartholomeu Perestrello, an Italian, who had distinguished himself in the maritime service of Portugal. While on a voyage to explore the western coast of Africa, a violent storm arose, which carried his vessel out of its course, and, after being tossed

[1] See Humboldt's "Cosmos."

[2] Joaõ Gonsalves da Camara, nicknamed "Zargo," or "Squint-eye," from a defect in his eyes; he is, however, generally known by the name of Joaõ Gonsalves Zargo.

[3] Madeira, in Portuguese, meaning "wood."

about for some days, was cast in sight of Porto Santo, where he found shelter from the storm, and, in joy for his deliverance, called the island by that name.[1] From thence a dark cloudy outline was visible on the horizon, which inspired Zargo and his companions with the idea of other territories existing there, and induced them to steer for the spot; with little delay the object was accomplished, and the point where they first made the land they named from their vessel Saõ Lourenço.

The great Christopher Columbus married Felippa the daughter of Perestrello, the discoverer, and afterwards governor, of Porto Santo; and he is stated to have received, at the death of his wife's father, those documents and memoranda which stimulated him to engage in his subsequent voyage of discovery. Columbus resided for some time at Porto Santo, and, it is said, made frequent voyages or excursions to Madeira, for the purpose of traffic, previous to those great expeditions which gave such celebrity to his name, and opened to Europe the Western World.

The island of Madeira lies between 32° 49′ 44″, and 32° 37′ 18″ north latitude, and between 16° 39′ 30″ and 17° 16′ 38″ west longitude, from Greenwich,[2] nearly 10° north of the Tropic of Cancer, and three or four degrees beyond the usual

[1] Porto-Santo, or Holy-haven.

[2] From observations furnished by Captain Azevedo, a very distinguished engineer, who has lately made a most accurate survey of the island.

limit of the trade winds. In form it is of an irregular oblong quadrangle, presenting in its whole circuit a series of bold and rugged headlands, extending to an elevation, at Cape Giram, of nearly 2,000 feet; and tapering off at its eastern extremity to a long narrow point of bold and rugged rocks, lying E.S.E. by compass. Its extreme length, from Point Saõ Lourenço to Point do Pargo, is 9¾ Portuguese leagues, or 32 geographical miles; its greatest breadth, from Point da Cruz to Point Saõ Jorge, is 12 geographical miles; and its circumference, taken from one point to another, the indentations being trifling, is only 77 miles.[1] The surface presents a singularly broken and mountainous appearance on every side, but more particularly towards the north, where the broad swell of the Atlantic foams up against the base of rocks which rise, almost perpendicularly, to an elevation of some hundreds of feet. Life is given to the scene by the many little villages at the mouths of the ravines, through which, during the heavy rains of autumn, the surrounding heights pour their turbid torrents into the sea.[2] These waters, during the summer months, appear like the transparent streams from a clear spring, as they bubble along the rocky bottom.

The whole formation of the island is of volcanic origin; and the huge masses of basaltic rocks,

[1] Observations by Captain Azevedo.

[2] These mountain torrents constitute the "Ribeiras," or rivers of the island.

lying on burnt earthy matter, show in many places the action of fire on their surface. On approaching from the north, the appearance is grand and picturesque: the abrupt and beetling crags and overhanging rocks, covered with rich verdure to their very summits, frequently hid by the misty vapours and darker clouds, and at intervals showing their rugged peaks far above; their rough outline thrown forward, and rendered more distinct, by the clouds below and the bright blue sky behind, with the dark luxuriant foliage of the vine and chestnut-tree on the lower parts of the narrow ridges and broken ravines, afford probably one of the finest glimpses of scenery to be met with in any part of the world.

From the lofty and almost perpendicular sea-cliff of Cape Giram, to the western end of the island, the scenery along the coast is somewhat similar, in its geological aspect, to that of the north, but without that rich verdure which is produced by the moister atmosphere on the comparatively uncultivated mountain ridges of that side of the island. The surrounding heights appear more dry and arid, and the wild luxuriant foliage of the evergreen Til and Vinhatico give place to the tame and comparatively uninteresting view of artificial terraces, with their sloping patches of trellised vines and stunted corn, depriving it of that wild aspect of nature which is so grand and imposing along the whole line of coast facing the north.

The appearance of the coast from Point Saõ Lourenço, the eastern promontory of the island, towards Funchal, is, for some miles, exceedingly bleak and barren, except around the villages of Machico and Santa Cruz, where more cultivation exists. Both of these hamlets are beautifully situated, at the outlet of streams collected from the various gorges of the mountains; and, especially the former, with steep and lofty hills rising abruptly on each side, and towering upwards of 2,000 feet behind. Large tracts of red and yellow tufas, interspersed here and there with clumps of dark pine-trees, cover the lofty hills; and the lower slopes are laid out in patches of miserably thin crops of grain, and stunted vines.

Abreast of Machico, and about 12 miles distant, the Desertas, a cluster of three small islands, rise almost perpendicularly from the sea, and stretch towards the south, appearing perfectly barren and arid. They are only accessible on one or two points, and are rarely visited, except by the fishermen for the purpose of procuring sea-fowl, or feeding a few goats during the winter months, when the moister atmosphere enables them to obtain a scanty pasturage. The ascent is exceedingly difficult, and can only be effected where the heavy rains on the surface, in descending towards the sea, have cut a deep gorge, and left it partly filled with large stones and débris.

Before the end of the fifteenth century the island of Madeira had attained a high state of prosperity,

and the fame of its riches frequently excited the rapacity of the numerous corsairs and adventurers who, at that early period, frequented the neighbouring seas. Several attempts were made by these freebooters to pillage Funchal, but without success, till 1566, when a calamity occurred which injured the prosperity of the island for some time. In that year a band of Huguenots from Rochelle attacked the city with success, and during the sixteen days in which these "*ladrões Franceses*," French robbers, held possession of it, many of the inhabitants sought refuge in the neighbouring mountains. The following abridged account of this outrage is translated from an ancient MS. by Doutor A. C. de Bettencourt e Vasconçellos, with a perusal of which the author has been kindly favoured by Senhor Caetano d'Araujo :—

"On the 3d of October, 1566, while at peace with France, and the island quiet and flourishing, eight French galleons anchored at Praya Formosa, about a league below Funchal, where, at dusk, they landed upwards of a thousand armed men, who, making a detour, descended upon the city by the Achada, where the Peak-fort now stands. Notice having been conveyed to Captain Francisco Gonsalves, then acting as governor in the absence of his nephew, Simaõ Gonsalves da Camara, Captain and Donatario of Funchal, who was then residing at Lisbon, he retired to the fortress of Saõ Lourenço, which was armed with artillery for the defence of the town. The inhabitants were so

taken by surprise that they could only muster a few men, who resisted their entrance at the gate of Saõ Paulo, now Saõ Francisco. On the following morning, after considerable fighting, the French became masters of the city. Two hundred of the inhabitants, and fifty of the French, fell in this engagement. They remained sixteen days, during which time they loaded their galleons with whatever riches they could find. The churches were plundered, the images were burnt or broken, the altars destroyed, and the relics profaned. On their entering to rob the church of Saõ Francisco, the friars all fled, and shut themselves in their cells; and they could only seize on nine, who were immediately put to death, besides one who died from fear or spasms. A vessel was at once despatched to Lisbon, from Machico, to give notice of this invasion, and Joaõ Gonsalves da Camara, son of the captain and donatario of the island, sailed almost immediately to their succour, with a large fleet, containing many nobles of the kingdom. Before they arrived, however, the French had already been gone six days, steering their vessels towards the Canaries. They afterwards passed the islands of Terceira, but, knowing their poverty, the inhabitants were not disturbed; so that their poverty proved riches to them at such a time."

After the usurpation of the throne of Portugal by Philip II. of Spain, in 1580, the importance of Madeira rapidly declined, till Don Joaõ IV. of Portugal threw off the Spanish yoke, in 1640, and,

by exciting again the energy of his subjects, raised the Portuguese colonies, in some measure, from their fallen state. Towards the end of the seventeenth century, when the naval power of England became paramount on the seas, the connexion between the island and that country became more intimate, and its prosperity rapidly increased. It was held, for a short period, by the British during the Peninsular wars, in 1801, under Col. Clinton, who arrived in the "Argo," Captain Bowen, with several transports containing a detachment of British troops, and garrisoned the island, as allies of Portugal, till the peace of Amiens was definitively signed in the following year. In December, 1807, General Beresford arrived in the "Centaur," Admiral Sir Samuel Hood, with transports conveying 4,000 troops, and took forcible possession of the island, which was retained under the British flag till April, 1808, when it was again restored to Portugal, though it continued to be garrisoned by British troops, to protect it against French invasion, till the general peace in 1814, when they finally evacuated the island.[1]

Madeira has been long treated with neglect by the successive Governments of Portugal, its coffers drained for their extravagance, and its commerce

[1] During the occupation of the island, from 1807 till 1814, the British troops were quartered in the College Barracks, the Encarnaçaõ Convent (the nuns of which were passed over to the Convent of Sta. Clara), the monastery of Saõ Francisco, and the fortress of Sant' Iago.

in a measure ruined by the most ill-timed and delusive measure of raising its status from a colony to the nominal dignity of a province, without affording it any retributive advantage, or treating it as an integral part of the kingdom. Its condition was greatly improved during the short period it was held by the British, under the able administration of General Beresford, in 1808.

The population of Madeira and Porto Santo, according to the census taken in 1849, amounted to 110,084 persons; of whom the district of Funchal contained 29,383,[1] showing a decrease from the census of 1839, of 5,677. This diminution, however, is easily to be accounted for, by the current of emigration which has set in, since 1840, to Demerara and the various islands of the West Indies; the returns for these ten years giving a total of 19,230, exclusive of those who, from the numerous impediments thrown in the way of emigration by the authorities of Funchal, have left the island clandestinely; and it is computed that these will amount, at the lowest calculation, to 11,000 more.

The British resident population, for the present year, consists of 81 families, or householders, giving a total of 317 persons.

[1] See Appendix A.

CHAPTER II.

APPEARANCE OF THE ISLAND FROM THE ANCHORAGE — DESCRIPTION OF THE ANCHORAGE—IMPRESSIONS ON LANDING—FUNCHAL: HISTORY, CHURCHES, CONVENTS, ETC.

AFTER passing Cape Garajáo,[1] or the Brazen-head, as the English residents call it, the city of Funchal opens to view, facing the south, with its white turreted houses, appearing in the form of an amphitheatre. The hills rise to a considerable elevation on each side, increasing in height as they close behind, till they attain an elevation of upwards of 4,000 feet. They present numerous ravines, and other irregularities of surface, which are richly cultivated, wherever cultivation is practicable, and adorned with innumerable "quintas," or villas. At an elevation of nearly 2,000 feet behind the city, the church of Nossa Senhora do Monte rears its double dome, out of a forest of chestnut-trees; and from this point the trellised vines extend almost to the centre of the town.

To reach the anchorage off Funchal, sailing vessels generally keep well out from the land, after clearing Cape Garajáo, unless the wind blows

[1] Named from "Garajáo," a species of sea-gull; and "Brazen-head," from the reddish colour of the rocks.

strong from the eastward, so as to reach the westerly sea-breeze, or *embate*,[1] as it is here called, which prevails during nearly nine months of the year, and is caused by the eddy formed by the lofty hills, when the wind prevails from the north or north-east. The roadstead is open, and exposed to all the blasts from east to south-west, which at times cause considerable destruction among the vessels at anchor. During the storms of winter the sea rolls into the bay with fearful violence, and should any of the vessels part their cables, or drag their anchors, during these southerly gales, there is little chance of their escape. In the course of a few hours, in October 1842, no less than five vessels came on shore, besides one supposed to have gone down at her anchorage, as nothing was ever seen of her after that fearful gale, except a few floating spars. To show the alacrity of the Portuguese in rendering assistance on such occasions, not a soul was lost on board of these vessels that came on shore, although the storm occurred during the night. Again, in December 1848, five vessels were cast ashore, within a short period of each other, and only one person was lost—through his anxiety to render assistance to his companions, while endeavouring to regain the deck of his vessel. In order to avoid these risks as much as possible, sailing vessels usually anchor about a quarter of a mile from the Loo Rock,[2] which

[1] *Embate*, to beat against.

[2] Called by the Portuguese, "Ilheo," small island.

Pontinha, and Bay of Funchal from the West

should bear about NN.E. by compass, from its affording good holding-ground at a depth of from twenty-five to thirty fathoms. By this means they are clear of the Points, and are generally able to slip their cables and put to sea before the force of the gale sets in. Steamers usually anchor much nearer the shore, having none of these risks to contend against, and affording greater convenience for taking in coals.

The line of coast forming what is called the Bay of Funchal, though it scarcely merits the name, begins to recede from the headland of Cape Garajáo on the east, towards the city, a distance of about three miles, and protrudes again more rapidly towards Ponta da Cruz, to the west of Funchal, with an indentation of little more than half a mile. Between Cape Garajáo and Fort Sant' Jago, which forms the eastern boundary of the town, the coast is bold and abrupt, broken only by one mountain gorge, at the outlet of which the new quarantine establishment is situated. From the fort alluded to the rough shingly beach commences, and extends as far as the Ribeira de Saõ Paulo,[1] the western boundary, where it again assumes its rugged and rocky character. Continuing to the westward for a short distance, the Pontinha[2] and Loo-rock, each crowned with a fort, are prominent objects from the anchorage. The former is connected with the land by a sort of

[1] Ribeira de Saõ Paulo, generally called Ribeira de Saõ Joaõ.

[2] "Pontinha," or narrow point.

bridge, or platform, while the latter, rising abruptly, stands out about a gun-shot distant from the high and rocky coast behind, and affords an uncertain shelter for small vessels while under repair. Between this rock and the heights above the Brazenhead a telegraphic communication is kept up, and the approach of all vessels announced, by a code of signals from the fort, long before they reach the anchorage, designating the class of vessel, her nation, and the direction from which she comes, or in which she first appears. Between the Loo-rock and the town, the beautiful Portuguese cemetery rears its slender cypress trees along the verge of the cliff. The "*Fortaleza*," or Governor's palace, rising behind the garden of the Praça da Rainha, is also a conspicuous object; it is built in various styles of architecture, and more resembles a barrack than the residence of a governor. Adjoining are the ruins of a mole, in the construction of which some thirty thousand dollars have been thrown, or rather washed away; the nature of the beach affording no proper foundation for such an undertaking: nearly two-thirds of it have already been destroyed by the force of the sea. Passing eastward, the tall pillar, originally built for unloading vessels,[1] the custom-

[1] This column was commenced in 1796, by Mr. John Light Banger, an English merchant, for the purpose of landing goods on the beach. The idea, however, proved a failure. It was finished in 1798, at an expense of 6,500 dollars, upwards of 1,350*l*. When first erected, its base was washed by the sea; since that period, the intervening beach has been thrown up.

house, and the Praça Academica, stand out from the line of houses; while the conspicuous Peak-fort, and Santa Clara convent, rear their bare white walls behind the town, and the church of "Our Lady of the Mount" shows its bright domes far in the rear.

Vessels, on anchoring in the roadstead of Funchal, are admitted to pratique by the health officers, who put off from the shore in a four-oared boat for that purpose; and, having ascertained that all the papers are correct, come on board, and the ship and passengers are clear of all further impediment. This boat is followed by one from the custom-house, with two officers, who remain on board while the vessel is discharging her cargo, or while any part of it remains on board; and scores of others in search of employment. Now, perhaps for the first time, the visitor witnesses a foreign scene, new to him in every respect. The noisy boatmen, full of eagerness, and jabbering in a language quite unintelligible to most English ears; their curiously shaped, but clean and neat boats, with long peaks rising some feet above the gunwale at both ends, together with the bustle on board and the completely foreign aspect around, strike one with admiration and astonishment, and render the scene in many respects exceedingly amusing. On landing, the visitor is struck with the change which a few days at sea have effected; everything appears new to him; the houses, the streets, the inhabitants, and the climate, all wear a

foreign appearance, and differ so materially from those he has just left, that he can scarcely believe in the reality of the scene: the absence of all wheeled vehicles, the want of traffic and bustle, give the place more the resemblance of an inland town, than the usually active and busy port of an island.

Captain Marryatt thus graphically describes the sensations of a visitor on arriving here for the first time:—"I do not know a spot on the globe which so astonishes and delights, upon first arrival, as the Island of Madeira. The voyager embarks, and is in all probability confined to his cabin, suffering under the dreadful prostration of sea-sickness. Perhaps he has left England in the gloomy close of autumn, or the frigid concentration of an English winter. In a week he again views that terra-firma which he had quitted with regret, and which, in his sufferings, he would have given half that he possessed to regain. When he lands upon the island, what a change! winter has become summer; the naked trees which he left are exchanged for the luxuriant and varied foliage; snow and frost for warmth and splendour; the scenery of the temperate zone for the profusion and magnificence of the tropics; a bright blue sky; a glowing sun; hills covered with vines; a deep blue sea; a picturesque and novel costume; all meet and delight the eye, just at the precise moment when to have landed on a barren island would have been considered a luxury."

The operation of landing at Funchal is, at times, rather exciting, especially to those accustomed to the many facilities of the English ports. Should the sea be at all rough, or a heavy swell setting in, the process is generally effected at the Pontinha, under the protection of the Loo-rock, where, watching the rising swell of the sea, the opportunity is seized to step quietly on shore; and, ascending a flight of steps, the bridge or platform which connects the rock with the shore is reached. Horses and palanquins are generally to be found here on such occasions, to convey the passengers to town, a distance of about half a mile. The necessity of landing at the Pontinho, however, rarely occurs, except in the case of passengers arriving by the Brazil steam packets, whose short detention obliges their getting on shore as speedily as possible. When the weather is such that the sailing packets can come to anchor, the landing is easily and safely effected, and it is rarely otherwise. Although a swell may set in sufficient to cause a considerable surf along the beach, the boatmen manage admirably, and it is a rare occurrence that one is disturbed even by the spray. On arriving close to the beach, the boat is turned with its stern towards the shore, and the rowers, with their nether garments tucked up, watch the opportunity, as one of the larger waves rolls in, to back the boat on its boiling crest, till it touches the shingly beach; then, leaping out, with the assistance of one or two others on shore, they pull their

craft, passengers and all, high and dry on the strand. The great object during this process is to remain still and quiet, for if a leap from the boat be attempted, a ducking is almost sure to follow. These precautions are not, however, always necessary, the sea being frequently so smooth that one may step on shore from the boat, without the necessity of being hauled up with it on the beach.

Funchal, the capital of Madeira, was so named by the discoverers of the island, from the extensive beds of "funcho," or fennel, which grew on the spot where the town was afterwards erected. It lies in 32° 37′ 45″ north latitude, and 16° 55′ 20″ west longitude, from Greenwich;[1] distant, by ship's course, about 1,325 miles from Southampton, 535 from Lisbon, 625 from Gibraltar, 380 from the coast of Africa, and 260 north of Santa Cruz, in the island of Teneriffe. The situation was selected by Zargo, between whom and Tristaõ Taxeira the island was nearly equally divided by Don Joaõ I. on their return to Lisbon, after their successful voyage of discovery; the former receiving the family name of Camara, and the appointment of Capitaõ e Donatario (captain and grantee) of the district of Funchal, conferred on him and his heirs. Tristaõ held a similar appointment at Machico; where he built the first church erected on the island, and dedicated it to Christ. This church is known at the present day as Machin's Chapel. His captaincy, in default of heirs, reverted to the crown

[1] From observations taken at the Loo rock, by Capt. Azevedo.

in 1540. The spiritualities of the island had been made over in perpetuity to the Order of Christ, by Dom John I, and the gift was confirmed by Pope Eugene IV, in 1442. The first church erected in Funchal was dedicated by Zargo to Santa Catharina;[1] and that of Nossa Senhora do Calháo followed, though this latter is generally, but erroneously, supposed to have been the first. In 1508 Santa Cruz and Calheta[2] were established as towns, and Funchal was, by Royal Charter of 21st August, raised to the dignity of a city, with a "Camara," or municipality, possessing privileges equal to those of Lisbon. In 1514, it was made a bishopric,[3] and by a bull of Paul III, of 8th January, 1539, was elevated to the dignity of an archbishopric. This position, however, it only retained till that of Goa was erected, in 1547.[4] The present Sé, or cathedral, was built by Dom Emanuel, King of Portugal, and opened in 1508, during the captaincy of Simaõ Gonsalves da Camara, surnamed "O Magnifico," the third in descent from Zargo: the building was commenced in 1485, but was not completed till 1514.[5] The style of architecture is Italian-Gothic, and the upper part of the square tower, or spire, is covered with glazed tiles. In the interior there is little worthy of notice, except it be the curious and rich ceiling, formed of the cedar-wood

[1] De Freitas, and Vasconcellos' MSS. (To the west of Funchal.)
[2] Vasconcellos' MS.
[3] Vasconcellos' MS.; Cordeyro, Hist. Insulana, lib. iii.
[4] Vasconcellos' MS. [5] Ibid.

of the island. The invasion and short occupation of the island by the French freebooters, (already alluded to,) during the reign of Dom Sebastian, in 1566, was followed by the arrival of the Jesuits. The first of that order accompanied the expedition sent from Lisbon for the relief of the city.[1] They established a college of their order in 1570, which they held till their expulsion by Don Jozé, in 1758. They also built the church of S. Joaõ Evangelista, now known as the "Igreja do Collegio," or College church, ornamented in front with the statues of St. Ignatius and St. Francis Xavier, the chiefs of their order, and two others of minor note. In its internal arrangements there is little to attract notice, except its rich and gorgeous altars. The interior of the church of Saõ Pedro has much the same appearance; and with that of the Soccorro, and the other churches of the island, possesses no attraction, in paintings or ornament, worthy of notice.

Among the convents and monasteries of Madeira, those of the Franciscan order (which includes the nunneries of Santa Clara and N. S. da Encarnaçaõ)

[1] "In company with Joaõ Gonsalves da Camara, in his vessel, and at his table, an envoy of the Society of Jesus, named Francisco Vaxera, a Castilian priest of great learning, was sent from Lisbon, for the service of God, to preach in this island, where he met with great success: he was the first of his order who arrived in the island, and, by his devotion, persuaded the people to petition the King, Dom Sebastian, to establish a college for his order at Funchal, to teach and instruct their sons."—*Vasconcellos' MS.*

held the most conspicuous place. The latter were suppressed, and their possessions confiscated by the Government, in 1834, when the island passed into the power of Don Pedro, on the final overthrow of his brother, Don Miguel. At that period, and also during the short reign of the Constitutional Government in Madeira, in 1822, the nuns were permitted to leave their convents; and a few availed themselves, for a time, of the privilege, but returned again to their cloisters, after a short enjoyment of the world's gaiety. The celebrated recluse, Maria Clementina, to whose history Coleridge has imparted such interest, still lives in the convent of Santa Clara, among some forty-eight of her sisterhood.[1] She is now somewhat advanced in life, and few, if any, traces remain of that beauty which our poet so warmly described. These nuns support themselves, in a great measure, by the manufacture, and sale, at the gratings of their reception rooms, of artificial flowers and fruits, with a few other ornamental productions. The former are usually made of dyed feathers, and the fruit of wax, and are prized by many visitors as affording a pleasing souvenir of their sojourn in Madeira.

The convent of the Encarnaçaõ, endowed in

[1] This convent is erected on the site of the church of N. S. da Conceiçaõ de Cima, the third church built by Zargo, and in it his remains are said to be deposited. It is a large and irregular pile of buildings, overlooking the town, and derives a limited income from property held by the sisterhood in and about the Curral.

1666, by Henrique Calassa de Viveiros, a canon of the church, contains about twenty-five nuns, who support themselves as those of Santa Clara.[1] Novices being no longer admitted into these establishments, the inmates are gradually decreasing in number; and their little property will, ere long, be in possession of the Government. The Convent of Bom Jesus affords a temporary asylum to young widows and deserted wives. That of the Capuchas, or Sisters of Mercy, contains about twenty-seven inmates, who are considered the most rigid observers of their monastic vows; they attend to all their menial work themselves, employing neither servants nor assistants, and seldom receive visits, even from their relatives.

[1] The founder of this convent gave up his quinta, or villa, as a site for the building, which he had promised to dedicate to N. S. da Encarnaçaõ.

CHAPTER III.

DESCRIPTION OF FUNCHAL—RIBEIROS—INUNDATIONS—PRACAS—BEACH—CARREIRA—ENGLISH CHAPEL—CEMETERIES—HOSPITALS—OLD BUILDINGS—MUNICIPAL GOVERNMENT—GARRISON—IMPROVEMENTS, ETC.

THE general appearance of the city of Funchal is by no means prepossessing. The streets are irregularly built, and paved with small rounded pieces of basalt, about the size of an egg, procured from the beach; and with rough broken pieces of the same material, so as to afford a firmer footing, where any considerable ascent exists. The larger and more respectable class of houses are interspersed with those of a small and shabby appearance, and are generally provided with balconies, which afford a gay and lively sight on "festas," or holidays, when they are usually crowded with the bright-coloured dresses and sparkling eyes of the Portuguese ladies. The lower parts are usually occupied as wine stores; and the streets appear narrow to those unaccustomed to foreign towns; at the same time, they are remarkably clean, and kept in good order and repair.

The town is intersected by three rivers, generally dry during the summer months, but rolling down in torrents, for short intervals, and with im-

mense velocity, during the usually heavy rains of autumn; often bearing enormous boulder stones along with their turbid waters, and, at times, carrying away bridges in their course, and inundating the lower parts of the town. One of these floods occurred in October 1803, during the night, which, in a great measure, destroyed the eastern part of the city. The church of N. S. do Calhão, the second church built by Zargo, which stood at the end of Rua da Santa Maria, on the site of the present western fruit-market, and many neighbouring houses were carried away. One of these, inhabited by an English family named Tatlock, near the Pelourinho Square,[1] was carried bodily into the sea, and, the upper part being of wood, floated about for a considerable time with the lights still glimmering from the windows: not a soul of this household escaped. The rivers were not then protected by those strong walls which now hem in their currents, as they pass through the city, and the loss of life and property was in consequence very great; above three hundred souls perished, and heaps of dead oxen, sheep, and domestic animals filled the streets, and lay scattered along the beach in the vicinity of the river which caused such devastation.

A like calamity occurred from the overflowing of the same river, and during the same month, in 1842, which, although the destruction of property

[1] In the centre of this square the pillory formerly existed; it was demolished about seventeen years ago.

was great, was by no means attended with such fearful results, as the mass of water came down during the day. These torrents are kept in their course, under ordinary circumstances, by strong thick walls; their beds being at a depth of from ten to twenty feet below the level of the adjoining streets, which however slope down in many cases to a line with the bed of the torrent. Most of these rivers have pleasant walks along their raised banks, shaded with large overhanging plane-trees, whose branches almost meet over the centre of the channel. Under their shade the washerwomen ply their task, and hammer the linen entrusted to their tender mercies, at a most destructive rate, against the large rough pieces of rock; and when the clothes are laid out to dry in the sun, the bed of the river appears as if covered with a sheet of snow.

The Praça Academica, and the Praça da Rainha, lying along the margin of the sea, and the Praça da Constituiçaõ, in front of the cathedral, afford a pleasant resort and lounge for the invalid. They are delightfully shaded with rows of fine trees, and provided with benches for the repose of the weary. At one or other of these promenades, the military band usually plays during the afternoons of the Sundays and festas. The native inhabitants then appear in all their finery, and many of the English residents and visitors take their evening's stroll, while listening to the airs discoursed by the Portuguese band, and inhaling the fumes of

horrid tobacco from the holiday cigars of the perambulating sprigs of fashion around, who, in gloves of all bright hues, delight in showing off an article in the form of a real Havannah, on all such public occasions.

Along the beach the scene is extremely animated, especially on the market days, when the little fleet of country boats arrives from the different village-ports of the island. These craft are often gaudily painted, and managed by a strong swarthy set of beings, more like savages than the inhabitants of a civilized country. They are almost in a state of nature while employed in landing or receiving their cargoes, and dive under the breakers, as they pass from the shore to their boats, as if they were amphibious. In fact, the boatmen generally, and the children living near the beach, are almost as much at home in the water as the fish themselves. The wine arriving in casks by these boats is thrown overboard a short way off the beach, and floated on shore, from whence it is conveyed in bullock-sledges to the various stores. All the cartage in the immediate neighbourhood of the town is effected on these sledges; that over the country is usually allotted to a small race of mules, scarcely larger than an ordinary sized donkey—but the loads they carry are really astonishing. The oxen are exceedingly quiet and docile, much more so than their drivers, who are a most noisy and boisterous set, raising their stentorian voices to a pitch quite deafening to

English ears, as they goad their poor animals along, with their usual call, "Ca-para-mim-boi[1]—ca—ca—ca—*oá*." These animals are usually preceded by a boy, whose low sharp note chimes in at intervals with the gruffer tone of the driver in the rear, who, besides his goad, carries a wet cloth, to drop under the sledge from time to time, so as to prevent its heating, and cause it to glide more smoothly along the street.

The Carreira, the principal street, intersects the city from east to west. At its upper extremity, in the Rua da Bella-vista, the British chapel stands enclosed in a beautiful and carefully-kept garden-ground, and completely closed in with trees and various tropical plants. The grounds for this chapel were purchased by the British Factory, in 1810, at a cost of 5,435 dollars, to which an additional piece was added some years later, at an expense of 840 dollars, for the purpose of erecting a house for the clergyman, which, however, has never yet been effected. The chapel was built by subscriptions raised among the permanent British residents, and a voluntary impost of 600 rs., equal to 2*s.* 6*d.* per pipe, on all wines exported by them. From want of funds, and various other difficulties, it was not opened for public worship till March, 1822, at a total cost of not less than 40,000 dollars, nearly 10,000*l.* sterling. The building was designed, and its erection superintended, by the late consul, Mr. Veitch; and the laws of Portugal, at

[1] Come to me, oxen—come—come—come.

that period, not permitting it to be raised in the form of a church, it does not possess the appearance outwardly of a place of worship. It is of the pure Ionic order, exceedingly chaste and neat, and, in its internal arrangements, well suited to the climate; although now found rather small for the increased influx of visitors during the winter.[1]

The two cemeteries, known as the "Residents'" and "Strangers'" burying-grounds, are entered a little further up the Carreira. The former, a small triangular piece of ground, opened in 1764,[2] is, as its name imports, generally reserved for the families of the permanent residents. The latter, nearly adjoining, was purchased by the British Factory, during the administration of General Beresford in 1808, and was first used for the

[1] Previous to the present century, the British merchants, although a numerous body, were without the services of a resident clergyman; and on the occasion of vessels arriving in port with a chaplain on board, he was requested to perform church service at the consul's residence, during the Sundays he remained; and was usually remunerated by the Factory with a present of a box of preserved citron, value, in 1771, six dollars. (See Appendix B.)

[2] Previous to the opening of this burying-ground, the bodies of all Protestants dying in Madeira were, through the bigotted prejudices of the Portuguese government, obliged to be carried out to sea for burial, and it was not till the establishment of an independent British consulate, that this law was abrogated; and even then, so strong were the prejudices of the natives, it was necessary for some years to employ a guard of soldiers, who accompanied the funeral procession to the cemetery, to protect the party from insult. This ground was then called the "Orange-tree," or *Larangeira*, by the Portuguese.

British troops, then garrisoning the island. It is considerably larger than the other, surrounded with tall cypress-trees, and the various tombs covered with the beautiful and sweet-scented heliotrope, geranium, rose, and other plants, over which the datura hangs its dark foliage, and drooping snow-white flowers. Altogether, this spot has a pleasing, though melancholy appearance, and one lingers, not unwillingly, among its rich and fragrant flowers, while reading with sadness the simple tale of many who, in the bloom and joy of youth, having sought these shores for a relief to their sufferings, through the influence of its balmy climate, and far removed from the endearing ties of friends and home, have only found that relief in the grave.

"Yet, emblem of the soul, sweet flowers are springing
In silvery beauty from the dreary sod;
They whisper thus, that all our spirits winging
Their way o'er death shall blossom yet with God."

D. Moore.

The Portuguese cemetery, at the Augustias, opened in 1841, is also worthy of notice. In beauty and simple neatness it almost surpasses the more secluded Protestant grounds, and contains many chaste tombs, neatly enclosed, and embosomed in flowers. Previous to its being opened, the interments took place in the cathedral, and other churches, on the floors of which the inscriptions over many tombs of former generations may be distinctly traced.

The Hospital of Saõ Lazaro, for lepers, is situated to the east of the Portuguese cemetery, and near the sea. The number of patients averages from thirty to thirty-five, most of whom are from the districts of Ponta do Sol, and Ponta do Pargo.[1]

The *Santa Casa da Misericordia*, or Hospital of Funchal, a large and commodious building, extending along the northern side of the Praça da Constituiçaõ, was erected in 1685; although much neglected, and its funds in a most unsatisfactory state, it still receives from sixty to eighty patients.[2] Attached to this hospital stands the convent of Santa Isabel, with its grated windows, built in 1726; and affording an asylum for female orphans, whose exit is only permitted on a prospect offering for their settlement in life, either by marriage or as domestic servants.

At the western extremity of the same Praça, stands the monastery of Saõ Francisco,[3] with its bare and now roofless walls. Since the suppression of the order of its former worthless inmates, it has been made little use of, and is now falling into ruins. Its buildings are overlooked by the "Fortaleza," the bulwark of Saõ Lourenço, where the great struggle was carried on between the inhabitants and the "Huguenot invaders," already

[1] See Appendix C. [2] See Appendix D.

[3] The Monastery of St. Francisco was established by Zargo; it was the largest on the island, and on it the others were dependent.

alluded to. The buildings attached to Saõ Lourenço were greatly altered, and part entirely rebuilt, during their occupation by General Beresford, as governor of the island, in 1808, and still form the residences of the civil and military governors. In one of the saloons there are several portraits, in oil colours, of the early captains of Funchal; one of these, representing a person of long thin features and grave aspect, is said to be an excellent likeness of Zargo.

A spacious theatre formerly occupied the greater part of the square, at the entrance of the "Fortaleza;" and, though the English merchants held considerable shares in the building, it was pulled down without their consent or remuneration, by order of the Portuguese Government, in 1833, to facilitate the defences, during the occupation of the island by the troops of Dom Miguel.

There are several curious old buildings still remaining in Funchal; one in Rua da Boa Viagem, which, from the figures cut on the stones forming the windows, is by many supposed to have been the *Açougue*, or meat market. The great Christopher Columbus, who resided for some time in the neighbouring island of Porto Santo, where his wife possessed a small property, is said to have sojourned, during his trading voyages to Madeira, in a house at the corner of Rua Dereita, leading towards the *Carmo;* but which has been removed during the present year. Some claim this celebrity for a large building in the Rua do Esmeraldo,

known as the "granel do poço;" and others for a house formerly existing near the Socorro. Little reliance can be placed on these contradictory traditions, but the "granel do poço" having been employed as the custom-house long previous to the erection of the present buildings, at the close of the sixteenth century, renders its claim the most doubtful of the three; and the acknowledged poverty of the great discovêrer would certainly point to a less ostentatious edifice as his place of abode.

The city of Funchal is governed by a "Camara," or municipal body, consisting of seven members, each of whom must possess an annual income of not less than 400 dollars; and the suffrage extends to all possessing an income of 100 dollars per annum. The *Administrador do Conçelho*, or chief magistrate of police, holds his appointment from the Crown. The town is plentifully supplied with excellent water, and the streets are clean, and well drained by covered sewers, having small stone gratings, at short distances from each other, along the centre of the streets, towards which the pebbled pavements have a slight inclination.

The garrison consists of a detachment of 450 to 500 men, including officers; and (with a small corps of artillery) are under the orders of a military governor, and the command of a colonel.

The present civil governor, Senhor José Silvestre Ribeiro, has done much towards the improvement of the town during the few years that he has had the direction of its internal affairs. The roads

having been put in a state of better repair, new communications opened, the streets more thoroughly cleaned, the sewers improved, and a series of oil-lamps placed at the corners of the different streets, afford a proof of the interest he has taken in improving the condition and appearance of the district under his more immediate charge. An asylum for the poor was established in 1847,[1] under his auspices, which has tended to remove the loathsome multitudes who infested the streets, thrusting their scars and sores into the face of every stranger as he landed on the beach, or passed through the town.

The income of the *Camara*, or municipality of Funchal, for the year ending 30th June, 1850, amounted to 30,818 dollars, against 26,820 dollars of the previous year.[2] Of this amount a large portion is expended in the support of foundlings; in repairing the roads, streets, &c., and in salaries.

[1] The number of paupers fed and clothed in this establishment, which is entirely supported by voluntary contributions, averages about 200. In January 1851, the returns gave—

Males under twelve years of age . . .	22	
Males above twelve do. . . .	51	
	—	73
Females under twelve years of age . . .	23	
Females above twelve do. . . .	98	
	—	121
Total		194

[2] See Appendix E.

CHAPTER IV.

INHABITANTS—MANNERS AND CUSTOMS—MUSIC—LITERATURE, ETC.

FROM the rugged nature of the roads in Madeira, the intercourse between the different districts is greatly restricted, and the inhabitants are generally ignorant of all that is passing in the world around! Their prejudices are usually strong, and they are stubbornly opposed to nearly all the modern improvements of civilized life: as their ancestors did, so are they contented to do.

The Madeirese are generally about the middle stature, and well formed. The complexion is more swarthy than that of the natives of the mother country, and, in many, a Moorish lineage can be traced. Their eyes are large and expressive, and, like their hair, almost invariably black. The men are hardy and athletic, and decidedly handsomer than the women, who have, even when young, an aged and haggard appearance, from the sedentary life they lead, and the early age at which they arrive at maturity. The hard-worked peasantry, however, frequently form a striking exception; they enjoy a decided advantage over the higher classes in personal appearance; and, among the tribe of females arriving from the mountains, with

supplies of fuel, &c. on their heads, fine features, as well as handsome and erect figures, are commonly met with. To strangers, as well as to each other, they are exceedingly civil and polite—the peasantry seldom passing along the roads without a recognition, accompanied by the removal of their "carapuça," a funnel-shaped cap, which is worn with considerable address, its long peak slightly inclined towards the right. The dress of the labouring class, or peasantry, is exceedingly picturesque. The women usually wear a garment of printed calico, or striped linsey-woolsey petticoat of island manufacture, with a red or blue baize cape bound with some lighter colour. The dress of the men generally consists of a pair of loose linen trousers, and a shirt, fastened at the neck with gold studs; in town, a gaudy-coloured waistcoat, and a short jacket thrown over the left shoulder, *à la houssard*, complete the toilet. A long stick, to assist them in climbing the hills, is a necessary adjunct; and the carapuça and yellow boots are alike worn by both sexes. They are generally cheerful, good-natured, sober, and contented; and the idea of political rights seldom enters their heads. Acts of violence are rarely resorted to, assassinations and burglaries are almost unknown, but petty thefts are common, and strict honesty is rarely met with. Their huckstering and bargaining dispositions are strongly developed, and domestic servants are particularly prone to take every advantage that may offer in marketing.

There is extreme distress and misery existing among the humbler class; and, in excursions through the island, the visitor is frequently surrounded with crowds of mendicants, many of whom are almost in a state of nudity, and their emaciated appearance shows plainly the miserable existence they must lead. Begging is a favourite occupation with all the lower orders, and the first lesson the infant receives is, to lift its tiny hands in the attitude of supplication, and pronounce the usual appeal for "*dez reisinhos pelo amor de Deos.*"[1]

The standard of religion is exceedingly low. The priests are careless and indifferent, and devoid of all energy. They received a slight stimulus, which, however, induced in many cases an active persecution, during the sojourn of Dr. Kalley, from 1840 to 1846; but since his violent ejection from the island, they have gradually reverted to their former state. The numerous conversions effected through his activity were truly astonishing, and many were obliged to emigrate to the West Indies, to avoid the bigotted persecutions raised against them through the influence of the priesthood, leaving large tracts of industriously cultivated land to neglect and ruin. Others, who with singular firmness adhere to the more enlightened faith they have adopted, still remain on the island, but subject to all those annoyances and petty persecutions which are even increased by the latest edicts of a government calling itself constitutional, which

1 "A small ten-rei piece for the love of God." 10 rs. = ½*d.*

impose fines and imprisonment on any individual who should venture to express a doubt of the truth of dogmas taught by the Church of Rome, or defend any of the doctrines condemned by that church.[1]

The island had been for several years without any resident bishop till the arrival of the present, who was duly installed, with all the pomp and pageantry attending such ceremonies, in November, 1850; but it is to be feared that the jealousy and continual interference of the clergy, will make his situation as unpleasant as his predecessors have found it. It is to be hoped that his example and activity may stimulate them to energetic and more useful labours.[2]

The peasantry are still a superstitious race, believing in the efficacy of charms, &c.; though perhaps in this respect they do not surpass the more ignorant of our own country. Their religious processions, of which there are many during the year, especially at Easter time, are objects of great pride and veneration; and the penitential processions, that accompany the prayers for rain, or other desirable changes of weather, are a truly painful sight. Their vows in sickness or misfortune are strictly fulfilled, and walking in procession, loaded with bars of iron and heavy chains, or, among females, climbing over the sharp-pointed stones, and long flight of steps, towards the Mount

[1] See Appendix F, for extract of these laws.

[2] See Appendix G.

Church, on their bare knees, are examples of their superstitious practices on these occasions.

The distaff is still in use, and the women employ their spare time in the manufacture of coarse linen and linsey-woolsey. The other manufactures of the island are straw-hats, baskets, lace-work, and embroidery, in which the natives excel; and at the convents the nuns find employment in making feather-flowers, preserves, and wax-work. Shoemakers and cabinet-makers are the most numerous class of artizans, and their work is usually good and cheap.

Though fond of music, the natives of Madeira, from the various political changes, have lost much of their former enthusiasm. The instruments in common use are the *machête*, or *machêtinho*, the Spanish guitar (*viola Françesa*), the *guitarra*, or old English guitar, with six double wires, and the violin (*rabeca*). The machête is peculiar to the island; it is a small guitar, with four strings of catgut, which are tuned in thirds, with the exception of the two lower, which have an interval of a fourth. This instrument is used by the peasantry to accompany the voice and the dance. The music consists of a succession of simple chords, but, in the hands of an accomplished player, the machête is capable of much more pleasing harmony; and the stranger is sometimes agreeably surprised to hear the fashionable music of our ball-rooms given with considerable effect, on what appears a very insignificant instrument. The Portuguese have

many exquisite vocal melodies (*modinhas*), but the kind of singing in vogue among the peasantry of Madeira scarcely deserves the name of music. To an English ear it more frequently resembles a prolonged howl. The singer commences at the top of his voice, holds on his high note as long as he can with one breath, and only descends to the bottom of the scale when the lungs are exhausted. Yet, to a Madeirese, there is something peculiarly exciting in this kind of singing.

On account of the rugged nature of the roads, nearly all the burthens are carried through the country on the shoulders of the peasantry, who generally travel in gangs. One of the party leads off with an extempore challenge to some one else, who howls his response, and thus an amusing conversation is kept up, which seems to lighten their loads, and relieve the fatigues of the journey. The weight carried by these hardy mountaineers is truly astonishing; a load of 200 to 250, or even 300 pounds, is by no means uncommon; and with these loads they will pass along the rough and steep paths of the island, from one side to the other, without much seeming fatigue.

Literature makes but a poor figure, even among the nominally educated classes. Few possess anything like a library, and even a book is seldom seen in the hands of youth, after their scholastic studies have ceased, unless it be a translation from the works of Eugene Sue, Paul de Kock, or some sim'ar author. They appear to know nothing of

the history or laws of the small island they have been reared upon, and are particularly ignorant of geography, and the manners and customs of foreign countries. There are, however, exceptions to this description, and some few are to be met with who have profited by travelling abroad, and who deplore the prevailing ignorance of the mass of their countrymen.

CHAPTER V.

GEOLOGY—NATURAL HISTORY—IRRIGATION—AGRICULTURE, ETC.

IN an excellent memoir on the geological formation of the island of Madeira, published in the Journal of the Geological Society,[1] Mr. Smith, of Jordan Hill, says: "The crust of the island of Madeira is composed, to the depth of several thousand feet, of subaërial volcanic matter, erupted during the tertiary period; and perhaps no other volcanic region offers more favourable opportunities for investigation. To account for its rugged and fragmentary character, it is not necessary to have recourse to the supposition that Madeira is one of the remains of a vast continent, as there are, in the volcanic constitution of the island, and in the action of the mountain torrents, sufficient elements to afford data for explaining every physical phenomenon."

"The igneous rocks, comprising the greater part of the island, are lavas, sand, and ashes, with bombs, lapilli, pumice, volcanic scoria and cinders, tupas and conglomerates: the non-igneous, the limestone of Saõ Viçente, the lignite of Saõ Jorge, and the sands of Caniçal.

[1] Proceedings of the Geological Society, vol. iii. part ii. No. 27.

"The lavas are wholly basaltic, containing numerous crystals of olivine; and they are compact, scoriaceous and vesicular. The compact variety occurs in beds interstratified with the other volcanic products, and in dykes which intersect all the igneous rocks; it is occasionally amorphous, but more often rudely columnar, and also, though rarely, presents regular columns."

"The scoriaceous basalt is rough and porous, resembling the slag of a foundry. The vesicular lava, or basalt, presents, through its whole mass, a porous texture. The lapilli, sand, ashes, and volcanic bombs appear to have been projected simultaneously, as the bombs are evidently half imbedded in the finer materials.

"Beds of pumice, varying in thickness, occur either on the surface or interstratified with the basalt and tufa, dispersed without regard to gravitation.

"The scoria, or cinders, also form extensive beds; they are generally reddish, and vary in size according to the distance from the orifice of eruption. The ashes, both dark and light coloured, are incoherent, except where they are mixed with earthy matter, or apparently fell on a heated cone of eruption, and in these cases they form a scoriaceous mass.

"Tufas and conglomerates compose a large portion of the rocks of Madeira, and are considered to owe their consistency to water.

"The most remarkable volcanic series, amount-

ing to many hundred beds, is at Cape Giram, the cliff, 1,000 feet in height, being stratified from the base to the summit; it has been rent in many places, and the fissures, which terminate upwards in acute angles, have been filled up with lava ejected from below.

"The principal chain of mountains must at one time have been much higher, because their very summits consist of beds which are met with only at the base of active volcanic cones.

"The limestone of Saõ Viçente belongs to the tertiary epoch; it crosses a mountain between two and three thousand feet above the level of the sea, and abounds in zoophytes and marine testacea. It is traversed by two dykes of basalt; and it lies immediately under the Paül da Serra, a volcanic plateau, which rises 2,500 feet above limestone.

"The coal, or lignite, occurs on the north side of the island, on the banks of one of the tributaries of the Saõ Jorge. Professor Johnstone considers it to be the dried relict of an ancient peat bog, and its lustre, compactness, and rhomboidal fracture to be due to the action of the basalt which overlies it. An analysis gave:

Carbon	60.70
Hydrogen	5.82
Oxygen and Nitrogen .	33.47 = 99.99,
And 20.05 per cent. of ash.	

This is the organic constitution of true peat; but no peat exists at present in Madeira.[1]

[1] There is, however, the "Atuleiros," a quaking bog, at Sant'

"The sands of Caniçal are found near the eastern extremity of the island; they consist of small particles of basalt and comminuted testacea, enclosing vast numbers of land-shells, as well as calcareous incrustations of plants. The shells have been carefully examined, and one-sixth ascertained to belong to species not now found living in the island. Dr. Macaulay is of opinion, from these incrustations consisting of carbonate and phosphate of lime, silica, and animal matter, that they are of animal origin, and probably belonging to the family of Aleyonidæ."[1]

In natural history the island of Madeira is particularly barren; there are no indigenous quadrupeds, or venomous reptiles of any kind. Both the brown and black rat are to be found in great abundance; and the common green lizard (*lacerta agilis*) is seen, sporting in thousands, on the walls and other places exposed to the rays of the sun; and, together with the rats, cause sad havoc among the ripe grapes. Frogs have been introduced

Antonio da Serra; and Dr. Lister suggests that perhaps a similar morass gave origin to the lignite of Saõ Jorge.

[1] Dr. Sebastian Fischer, medical attendant to His I. H. the Duke of Leuchtenberg, during his visit to Madeira in 1849, a diligent microscopic observer, and well known to the savans of St. Petersburgh for his valuable researches with that instrument, has carefully examined these seeming calcareous incrustations with the microscope, and gives his opinion that they are decidedly coral formations. In form they certainly very much resemble the branches of coral, frequently fished up by the fishermen, along the coast.

within the present century, and swarm along the margin of the mountain streams, where their incessant croaking is far from being agreeable. The mosquito is rather troublesome at times, but it is not nearly so common as in other warm climates. And the zebra-spider, a species of *tarantula*, is found among the branches of *cacti*, or prickly pear; but its bite, though slightly venomous, is by no means severe. The small brown ant is very troublesome in the cupboards of most of the houses; and the common house-fly is often annoying during the warmer seasons. The feathered tribe is exceedingly rare; a few red-legged partridges, quail, and woodcock, are found on the hills. The rock-pigeon, *columbia livia*, is found along the rocky coast, but is shy and difficult of approach. There are few small birds to be seen; the goldfinch, *fringilla carduelis;* the canary, *carduelis canaria;* and the blackbird, redbreast, and sparrow, are the most abundant. The wagtail is also common, and the swallow remains during the winter. The tintonegro, a species of blackcap, or nightingale, belonging to the genus "*conirostres*" of Cuvier, is peculiar to the island, and is much prized for the sweetness of its note. A beautiful species of owl, *strix flammia*, is found among the rocks on the mountains. The small sparrow-hawk abounds; and the manta, *falco œsalon*, is common in the neighbourhood of the loftier peaks. Of the gull tribe there is a considerable variety to be found along the coast, but more particularly about the

Desertas, where a peculiar species of night petrel, of a brownish black colour, is to be found in great abundance, and can be easily caught while asleep, during the day, under the rocks and stones left by the torrents in their almost precipitous course towards the sea. Rabbits are plentiful in the different serras, and upper districts of the island, but more particularly along the Paül da Serra, where they exist in great abundance. The hare, though at one time introduced, has not been found to thrive, and is no longer to be met with on the island.

Of fish there is a great variety existing along the coast of the island; as many as 170 species are said to have been discovered.[1] There are scarcely any sea-shells to be met with; and all kinds of shell-fish are rare.

Notwithstanding the advantages of climate the cultivation of Madeira is far behind most other civilized nations. Near the sea, and at the bottom of the ravines, the soil is generally of a rich alluvial nature, and, when water can be procured for irrigation, is well adapted for agricultural purposes. On the higher districts, however, it is usually light, and without substance. The grounds are irrigated by means of *levadas*, or water-courses, branching off from the mountain streams, at a considerable elevation, along the side of the hills, with subordi-

[1] A valuable work by the Rev. R T. Lowe, entitled "History of the Fishes of Madeira," J. Van Voorst, London, was prepared for the press some years ago, but only a few numbers have been published.

nate channels to convey the water to the different "fazendas," or properties lying below, each of which is entitled to so many hours' supply during a given period, according to their respective rights, established by law or purchase. The water thus supplied forms an article of sale and purchase among the peasantry, according to their requirements, and is often the cause of great contention and protracted litigation. These levadas are scattered over the island in almost every direction, and constitute the principal public works of Madeira. The most important are those of Rabaçal and the Furado; the former intended to convey the water from the source of the Ribeira da Janella, on the north side of the island, through an extensive tunnel, to irrigate the considerable tracts of hitherto neglected land lying above Calheta, and the Paül do Mar, on the south coast. This undertaking was begun in 1836. At the head of a deep and narrow ravine, where the Ribeira da Janella commences, a water-course has been cut about 600 feet along the face of a perpendicular rock, at an elevation of about 300 feet from its base, which receives a crystal stream, as it trickles down the side of the precipice, extending upwards of 600 feet above; and obtains additional supplies from every available source, as it winds along the northern side of the mountains, till, passing through a tunnel of 1,400 feet in length, and in width and depth about 40 feet, the levada emerges on the south, and continues along the hills for a distance

of six miles from its source. Such are the engineering qualifications, however, of those interested in the management of this meritorious work, that, after an outlay of upwards of 8,000*l.* sterling, the inclination is found to be the wrong way! So erroneous have been their calculations, that the tunnel, of which such boasts have been made, has yet to be lowered upwards of 15 feet, and the rest of the water-course in proportion, before the final object can be realized; and it appears doubtful, according to the opinion of one of the best engineers of the island, whether it would not yet be advisable to alter the whole plan of the work, and carry the water through one of the mountains nearer its source. The Levada do Furado was commenced in 1840, by a joint-stock association, to bring an extensive supply of water from the Ribeiro do Balcaõ, one of the tributaries of the Ribeira do Fayal, along the northern side of the mountains, to the Lamaceiros, and from thence along the south, behind Sant' Antonio da Serra and Camacha, to the heights above the eastern part of Funchal, a distance, including the windings along its course, of nearly forty-five miles. The shares were issued at 25 dollars, and the estimated cost amounted to 9,000 dollars. Upwards of 41,000 dollars, however, have already been expended, and, although the levada is completed throughout, the water only flows as far as Sant' Antonio da Serra, and the districts below, where it was comparatively little required. From

this point it is either perfectly level, or inclining upwards, and remains as a monument of the ill-regulated surveys, and mismanagement of the parties entrusted with the superintendence of this laudable undertaking.

A large portion of the surface of Madeira is unfit for cultivation. The upper districts, the region of the heath and bilberry, which constitute fully one-half, are too elevated and barren for the production of grain; and a large portion of the remainder is either bare rock, or too precipitous for cultivation; so that probably not more than one-fourth of the island is actually cultivated. The agricultural implements in use are of the rudest description, and consist of the *enchada*, a slightly curved and short pick-axe, which only partially turns up the soil; the *arado*, or plough, a most primitive instrument, almost entirely of wood, and somewhat resembling the *aratrum* of the ancient Romans; the *fouce*, or *foucinho*, a jagged-edged sickle, used in cutting grass, &c. for their cattle; and the *podaõ*, an angular-shaped pruning-knife.

There is seldom any rotation of crops, or change of cultivation. Bearded wheat and barley are grown on the same lands from generation to generation, so that it is not to be wondered at that their average produce should be so limited as rarely to exceed ten bushels per acre; and the produce of rye grown in the upper districts is even less. The bearded wheat is more extensively cul-

tivated than any other cereal, and occupies fully one-half of the arable land; but the produce of grain over the whole island does not exceed three months' consumption. Wheat is sown from October to January, and the harvest takes place, according to the locality, in May or June. The grain is usually pulled up by the roots, and the ground afterwards prepared for sweet potatoes or beans. It is trodden out by oxen, in flat circular enclosures,[1] surrounded by a low parapet of loose stones, and generally formed on some exposed point of land, where the process of winnowing is also carried on, by throwing the grain in the air, and allowing the breeze to carry the chaff aside. The Old Testament injunction, "Thou shalt not muzzle the ox that treadeth out the corn," is still rigorously observed.

Maize, or Indian corn, which constitutes one of the principal articles of food among the poorer class, has of late years been cultivated with considerable success in the northern parts of the island, and its cultivation might, with almost incalculable advantage to the peasantry, be greatly extended. At present it is largely imported from Portugal, the Azores, and America.

An improvement, however, on the rude system of agriculture hitherto prevailing in Madeira, is gradually becoming apparent. A society has lately (1850) been formed at Funchal, under the auspices of H. I. H. the Duke of Leuchtenberg, and pre-

[1] These threshing-floors are called "Eiras" by the natives.

sided over by his Excellency the Civil Governor, for the purpose of introducing seeds, plants, and implements, and improving the agriculture of the island, and all the arts relating thereto. The Society already numbers about 150 influential members, thirty of whom are annually appointed Directors; and it is to be hoped the Agricultural Society of Madeira may ere long be productive of immense advantage to the island generally.

CHAPTER VI.

TENURE OF LAND—CULTIVATION OF THE SUGAR-CANE—VINE—VINTAGE—WINES—EXPORTS.

THE vineyards, and different allotments of land in Madeira, are generally of small extent. Though appearing large in many parts, they are so divided among the different "casciros," or tenants, that the produce of each is usually limited to a few barrels of wine, or a trifling portion of grain; and this subdivision is a principal cause of the poverty existing among this class—nearly one-fourth of the inhabitants. These "casciros," similar to the Roman coloni, hold their lands on the metayer system, divide the multifarious produce of their grounds with the landlord, or morgado, and pay the State one-half of the tithe in wine and grain. The property of the morgados is entailed, merely forming a possession for life; but they are compelled to provide a "mezada," or monthly allowance, to brothers and sisters, according to the income derived from their entail.

Previous to the revolution of 1821, the occupiers of land looked upon these morgados as their feudal lords, and extended to them all the homage which usually accompanies such a system. Under these

circumstances it is not surprising that the estates are rarely improved. The caseiro acts quite independently of the lord of the soil, and is absolute owner of all the *bemfeitorias*, or improvements in buildings, plants, &c., which he must be paid for, according to valuation, before his removal can be effected; and on his death the right of cultivation, along with the bemfeitorias, &c., are usually parted among his children, increasing the subdivision of land from year to year.[1]

The sugar-cane, formerly the chief produce of Madeira, was first introduced by Dom Henry, Prince of Portugal, in 1425, and planted at Machico. It rapidly progressed in importance, and at the end of the same century the number of sugar mills along the southern coast exceeded one hundred and twenty; the first being erected by Diogo Vaz de Teive, near the village of Machico, in 1452. The half of the tithe, which went to the government in 1500, exceeded a million of "arrateis," or pounds. This continued to form the chief, or only commercial produce of the island, till the end of the sixteenth century, when, during the usurpation of Philip II. of Spain, the abundance of sugar furnished by the different parts of America, according to De Freitas' MS., caused its rapid decline in Madeira. The cultivation was chiefly

[1] See an excellent memoir "On the Tenure of Land in the Island of Madeira," by Dr. Peacock, Dean of Ely, read before the meeting of the British Association, September, 1849: reported in the Athenæum, No. 1144, page 995.

carried on by slaves, composed of the descendants of the conquered Moors of Portugal, Moorish captives taken during the wars, and a few Negroes from the coast of Africa. In 1552, according to Gasper Fructuoso, the island of Madeira contained upwards of 2,700 slaves. From Madeira the sugar-cane was introduced into the Brazils, in 1510, ten years after the discovery of that country by the celebrated Pedro Alvarez Cabral, and, in 1513, to the island of St. Vincent, in the West Indies. At present the sugar-cane is little cultivated in Madeira, and is only used in the manufacture of "mel," or syrup, for preserves, &c. There are still three mills existing for pressing the canes for this purpose; one at Praya Formosa, one at Sãõ Martinho, and the other at Rua do Chapeo, in Funchal.

On the decline of the trade in sugar, the vine became the great staple of Madeira. Some writers state that this plant was introduced by Prince Henry, during the year following the discovery of the island; but this is highly improbable, for all the early authorities assert, that, to clear the grounds for agricultural purposes, Zargo set fire to the woods, which continued burning for several years.[1] At all events, it appears evident that the

[1] Manoel Thomas, in his "Insulana," written within two centuries of the discovery of the island, states that the fire continued burning for eighty-four months; and adds, that the settlers had to seek refuge in their ships, from the raging of the fire.

island was not cleared for cultivation till some years subsequent to that period.

The vine was probably introduced in 1425, from Cyprus, but it was not actively cultivated till the early part of the sixteenth century; and it is more than probable that the finest descriptions were introduced by the Jesuits at a much later period. The wines from their estates excelled all others, and, although these estates have now passed into other hands, their produce still bears a preference.

The vine is propagated from cuttings, planted at a depth of from three to six feet; and there is generally no produce for the first three years. During the second or third spring they are trained along a net-work of canes, *Arundo sagittata*, (which is extensively grown, in low or moist situations, for that purpose,) and supported by stakes about three or four feet from the ground. In the north, however, and other inferior positions, they are generally trained on chestnut-trees, as a less expensive mode of cultivation; and this is certainly more picturesque and pleasing to the eye than the stiff and formal trellis-work, under which all sorts of vegetables are cultivated, and weeds allowed to grow in abundance; the grape however is said to be richer when grown near the ground.

The vintage usually takes place, in the south, in the early part of September; and, according to the exposure or elevation, from a fortnight to three weeks later in the north. The rats and lizards are said to destroy nearly one-fifth of the produce, and

leaving the lower vineyards as the vintage progresses upwards, make sad havoc among the later produce. The grapes, when gathered, are "escolhido," or picked; those of an inferior quality being generally reserved by themselves. They are then thrown into the "lagar," or wine-press, a large and clumsy wooden trough, where they are trodden by the feet; and after the first juice has been drawn off, the remaining mass is collected together, and, a rope being coiled round it, a lever pressure is applied. The juice is received in a tub, and conveyed to the stores in goat-skins, where it is emptied into casks for the purpose of fermentation, which usually lasts, in an active state, for four or five weeks. After the juice has been extracted, a quantity of water is thrown into the press, and the refuse undergoing a repetition of the same process, produces the "agoa pé," foot-water, or dregs, a drink held in great estimation by the lower classes, but frequently producing violent diarrhœa, especially if used after the fermentation has commenced.

When the wine has ceased fermenting, it is drawn off the lees, and transferred to other casks, when it is clarified with eggs, ox-blood, or more frequently gypsum, a gallon or two of brandy having been previously added to each pipe to prevent the acetous fermentation taking place. The brandy used for this purpose is made on the island, from the most inferior wines, such as those of Porto Santo, Saõ Viçente and other parts of the north.

The average produce of the vine throughout the island is estimated at a little over a pipe per acre. The inferior descriptions of wine, after being clarified, are subjected, in stoves, to a temperature of 140° to 160° Fahr. for six months, by which process of forcing they assume an apparent age; but, at the same time, a dry and smoky flavour, which can never be entirely eradicated. This class of wines is shipped annually, in large quantities, to Hamburgh, where it undergoes a process which changes its character to that of Hock, under which name a large portion of it finds its way into the English market.

The wines produced along the southern coast of the island of Madeira are probably unequalled by any other country, either in body, aroma, softness, or delicacy of flavour. The following constitute the principal wines and grapes of the island; the grapes are never exported, and many of the wines are rarely to be met with out of the island.

Malmsey.—A light-coloured wine, made from the "Malvazia Candida,"[1] a large oval grape, of a rich gold-colour when ripe, hanging in long and rather thin pendulous bunches. The finest wines of this class are produced at the "Fazenda dos Padres," formerly belonging to the Jesuits, and the "Paül do Mar," both to the west of Funchal. To the growers it is considered a most unprofitable vine, only producing close to the sea, and the flower

[1] Corrupted from Candia, from which island it was first introduced, in 1445.

being so delicate that the slightest fog or moisture, during the spring, is sure to destroy it; the produce for years together is frequently little or nothing. The Malmsey on this account, as well as on account of its very superior and rich character, is considered the most valuable of all the Madeira wines, and is usually charged from 75*l.* to 85*l.* per pipe on board. The other grapes of the same class are the *Malvaziaõ*, which is only fit for making vinegar, and the *Malvazia Roxa*, a reddish-coloured and inferior grape, used only for inferior wines.

Bûal.—A soft and delicate wine, made from a beautiful round straw-coloured grape, about the size of a small marble, and when ripe must be immediately cut, otherwise it shrinks and yields little juice. Campanario was formerly the most famed situation for the Bûal grape, but of late years it has become scarce, probably in consequence of its precarious produce. The wine is of a peculiarly delicate and rich mellow character, and a splendid wine either when new or old. The usual shipping price of Bûal is from 70*l.* to 80 guineas per pipe.

Sercial.—A dry light-coloured wine, of strong aroma and high flavour, produced from the round *Hock grape*, hanging in thickly-clustered bunches. The finest quality of Sercial is produced at the Paûl do Mar, and is so unpleasant to the palate when new, that it can only be used after it has attained an age of eight years; it is then consi-

dered, by connoisseurs, the finest and most wholesome of all the wines of Madeira, as well as an excellent stomachic. The grape itself is quite uneatable, even the lizards will not touch it. It is usually exported at from 70*l.* to 80*l.* per pipe. The *Serilha*, a grape of the same class, produces a weak and inferior wine, but is seldom grown; and the *Esganacaõ*, grown in the upper districts of Ponto do Sol and Seiçal, is generally pressed along with other inferior grapes, for common use on the island.

Tinta, or *Madeira Burgundy*.—A dark and peculiarly fine-flavoured wine, made from the small black Burgundy grape. The best wines of this description are grown in the districts of Cama dos Lobos and the Estreito; it receives its high claret colour from the husks of the grape, which are allowed to remain in the wine during the process of fermentation, and which also impart to it the astringent property of Port. Tinta should be used during the first or second year; after that period it gradually loses its fine aroma and delicate flavour. The usual price of this wine is from 60*l.* to 70*l.* per pipe.

Tinto.—A dark wine, made from the *Negra Molle* grape, considerably larger, softer, and more juicy than the Tinta, or Burgundy grape; it produces abundantly, and is generally used with the other varieties of grape in making Madeira.

Madeira,—so called from its being the principal wine of the island,—is made from a variety of grapes

mixed together in the wine-press, the *Verdêlho*, *Tinto*, *Terrentrez*, and *Bûal* predominating. When new it is generally of a light-claret colour, but which is gradually deposited as the wine advances towards maturity, when it assumes a bright amber appearance. The most esteemed Madeira is produced on that part of the island lying between Funchal and Campanario, but more particularly in the districts of Cama dos Lobos and the Estreito. This wine is supposed to be much improved by a voyage to the East or West Indies, and is classed accordingly in the London market, as "London Particular," and "East or West India Madeira;" the usual shipping price being from 25*l.* to 50*l.* and upwards per pipe.

Verdêlho.—A pale, strong-bodied, and peculiarly fine-flavoured wine, made from a small light-coloured grape of the same name, grown over the whole island, from the coast to an elevation of 2,700 feet above the sea. The finest Verdêlho is produced on the south coast, and the valley of Porto Cruz on the north, and, when pure, arrives sooner at maturity than any other wine of Madeira.

Palhête, or *Vinho pallido.*—A very pale straw-coloured wine, usually made from the *Verdêlho* grape, by a process of clarification with charcoal, which destroys the rich colour, and in a great measure the body and fine flavour of the wine.

Surdo. — A sort of liqueur, made from the strongest bodied and thoroughly ripe grapes, both

light and dark coloured, by preventing the fermentation taking place, and thus retaining all the sweetness of the must. It is chiefly used for giving body and softness to wines of an inferior description. Surdo has been exported in small quantities, under the name of Nuns' wine; it has now, however, ceased to be shipped.

Negrinho.—A rich dark-coloured wine, or cordial, made from a dark, round, pulpy grape, called by the natives *Maroto*, and considered the most inferior of all the grapes used in making wine; it is, however, very hardy and prolific, but never thoroughly ripens: when cut, it is partially dried in the sun before being pressed. Negrinho is only made in small quantities, and is rarely met with.

There are many other kinds of grape grown on the island. The large and formidable Alicant and Muscatel are cultivated in private gardens, for the table, and, it is said, nearly forty different kinds for making wine.

The wines of Madeira, with the exception of Tinta, should be kept in cellars of a moderate and equable temperature, and should be placed, for a short period, at a moderate distance from the fire before being decanted; and the decanter heated in like manner.

The exact quantity of wine produced on the island of Madeira is totally unknown; it is supposed, however, to amount, at the lowest calculation, to from eighteen to twenty thousand pipes

annually, of which about one-third only is exported; the remaining portion is either converted into brandy, or consumed on the island.[1]

The total quantity exported during the year 1850, amounted to 7,125 pipes;[2] showing a decrease of 254 pipes from the returns of the previous year, and 850 pipes less than the total exports of 1840. In 1809, there were 15,363 pipes shipped from Madeira, in British vessels alone, and the quantity imported into England, during the same year, exceeded 639,000 gallons. The demand for these wines in Great Britain has been rapidly decreasing for some years past. The total deliveries for home consumption, in 1849, amounted to 71,097 gallons, against 112,555 gallons in 1840; showing a decrease of 41,458 gallons, or nearly one-third, in ten years.[3] In 1821, upwards of 400,000 gallons were retained for home consumption in the United Kingdom.

[1] The returns made to government of the entire produce of the vintage of 1850, calculated from the tithe, amounted only to 12,964½ pipes. It is presumed, however, by competent persons, that nearly double that quantity was produced. The tithes of the different parishes being generally disposed of *in gross*, by auction, it becomes an object to the purchaser to make the returns as low as possible, that he may obtain the future tithes at a low rate. And, when these sales are effected at a fixed price per barrel, the returns made by the collectors appointed by government are equally unsatisfactory, from circumstances easily accounted for. These returns, some fifteen or twenty years ago, when more correctly made, gave upwards of 30,000 pipes as the annual produce of the island.

[2] See Table of Exports, Appendix H. [3] Ibid.

This falling off in the consumption of Madeira wines in England has, however, opened other markets; and we find by returns from the United States of America, that the quantity imported into that country from England, and direct from Madeira, increased from 101,176 gallons in 1845, to 303,125 gallons in 1850; being 201,945 gallons, or nearly 200 per cent., in 5 years!

CHAPTER VII.

FRUITS—VEGETABLES—TREES—FLOWERS, ETC.

FEW countries surpass Madeira in the variety and abundance of its fruits. Their cultivation, however, is very much neglected; the plants are allowed to grow almost wild, and are seldom engrafted, or even pruned; the quality is therefore miserably inferior to that of other localities. The object of the cultivators in Madeira appears to be quantity, without the slightest regard to quality.

Citron, which grows extensively in the north, and formed at one time a considerable article of export, is still prepared and candied in small quantities by the nuns of Santa Clara, and a few other parties, but only for consumption on the island. At times it is shipped to the London market, preserved in a strong salt brine, and is there prepared for use.

The orange grows well, and is abundant over the whole island, under an elevation of 2,000 feet. The cultivation, however, as with all their fruit-trees, is quite neglected, and the fruit in consequence is very inferior to that of the Azores and

other parts: the finest are produced along the north coast. If properly attended to, the orange might be made a very valuable and profitable article of export; at present only a few boxes are shipped annually, to arrive in England before the produce of the other orange-growing countries can be obtained.

The guava, *Psidium pomiferum*, and banana, *Musa paradisaica*, are extensively grown and exceedingly cheap; the latter is sometimes exported, in limited quantities however, to the London market, where the fruit is considered a rarity. The custard apple, *Annona squamosa*, is also grown, but chiefly in private gardens, and is seldom to be met with in the markets. The West Indian mango has been lately introduced, and thrives admirably. Lemons, peaches, apricots, pomegranates, "*jambro*," or rose-apples, *Eugenia jambos*, figs, and all the fruits belonging to temperate climates, are produced in great abundance, but generally of inferior quality. The Cape gooseberry, *Physalis edulis*, and the small Alpine strawberry, grow wild about the mountains; where the bilberry, *Vaccinium madeirense*, is also met with in great abundance.

Coffee and arrowroot are cultivated to some extent, and are of superior quality. The latter can be purchased from the country people, who bring it to town for sale, at from 3*d.* to 4*d.* per pound.

The supply of vegetables is most abundant, but they are generally coarse, and greatly inferior in

quality to those raised in England. The inhame, the *Arum peregrinum* of Persoon, is extensively cultivated near the rivers and water-courses, to an elevation of 2,600 feet above the sea. The roots are large and productive, frequently weighing from three to four pounds, and, from its cheapness, forms when boiled one of the chief articles of food among the peasantry. It is coarse and harsh to the taste, and requires considerable care in cooking. The leaves are exceeding acrid and only used in feeding pigs.

The sweet potato, *Convolvulus edulis*, is also extensively grown, on dryer situations; it is one of the commonest vegetables produced on the island, and most valuable to the peasantry. It yields most abundantly, and the long tendrils and leaves form an excellent food for their cattle. No outlay is required for its cultivation, except in manure, as it produces from the tendrils, which are again laid in the ground as the roots are dug up. The common potato is also extensively cultivated, and is well adapted to the soil of the upper districts of the island, where as many as three crops can be obtained from the same ground in one year. Of late, however, the produce of this vegetable has been rather precarious; the same disease which has so materially injured the plant in England having extended its ravages even to the soil of Madeira. Cabbages and pumpkins are grown round almost every hut.

Melons, cucumbers, chou-chou, *Sechium edule*,

and others of the same species, are easily obtained, and the other vegetables of Europe are to be had in great abundance during the greater part of the year. Artichokes, asparagus, celery, and the more expensive garden produce, are grown in the "quintas" of the British residents in great perfection. In fact, nearly all the fruits and vegetables, whether of temperate or tropical climates, may be produced in Madeira in great abundance, and of superior quality, if their cultivation were properly attended to.

The tea-plant is grown by Mr. Veitch, at his villa near the Curral, about 2,700 feet above the sea. And tobacco might be extensively cultivated were the restrictions imposed by Government, to favour the monopoly of the contractors for the supply of this article, removed; even on the now barren *Desertas* it might be advantageously grown.

The different kinds of cacti are found in great luxuriance.

The *Opuntia decumana* flourishes on the most arid and rocky soils, and would afford an excellent opening for the cultivation of the cochineal insect, which appears to thrive well on this plant. The experiment has already been tried, with most satisfactory results; but the people are generally so devoid of energy in these matters, that, notwithstanding the decline of their wine trade, and consequent poverty, no substitute has yet been adopted with sufficient perseverance to obtain a favourable result.

The *Morus multicaulus* has been introduced, and thrives most luxuriantly; and an experiment is now being made to rear the silkworm.

The *Ruivinha*, or madder,—the woad, *Isatis tinctoria*,—and the turmeric, *Curcuma longa*, grow wild on the mountains; and, with the bright scarlet flower of the *Salvia splendens*, are used by the nuns in dyeing. The cotton-plant has been tried, and grows well; and the castor-oil plant, *Ricinus communis*, produces most abundantly, and grows wild over the country.

The indigenous forest trees of Madeira, formerly existing in great abundance, have become exceedingly scarce, except in those abrupt and precipitous ravines in the north of the island, where the wood-cutter and charcoal-burner have been unable to ply their axe. The native cedar, of which the roof of the cathedral is formed, has almost entirely disappeared; and the dragon-tree, which formerly attained such an enormous size, and grew in such abundance, is now only to be met with in a few private "quintas."

The til, *Laurus fœtens*,—and vinhatico, *Laurus indica*, or island mahogany, are still met with on the mountains in the north, and their wood is much prized for cabinet work. The til, when newly cut, possesses a most disagreeable odour of sulphuretted hydrogen; when old, the wood is of a fine black colour, and is now chiefly obtained from the beams and joists of the early buildings.

The beautiful flowering Folhado, *Clethra arboria*,

indigenous to the island, forms almost a forest at Ribeiro Frio, and other parts of the north. The wood is white, close grained, and exceedingly tough; and is chiefly used for the poles of palanquins and hammocks.

The heath-tree, *Erica arboria*, and teixo or yew, *Taxas baccata*, grow luxuriantly on the high lands, and attain, especially the former, an astonishing size. Walnut and chestnut[1] trees cover the hills; and the fruit of the latter forms a considerable article of food among the peasantry.

The pine and oriental plane have been extensively introduced, the former now covering the mountains with verdure along the whole southern range.

The oak retains its leaves till the new shoots appear, in February, and, with the cork-tree, *Quercus suber*, grows most luxuriantly. The honey-locust acacia, *Gleditschia triacanthos*, is met with in the lower regions; and the *Magnolia grandiflora*, and other plants of the same species, thrive well and attain a great size.

In the beautiful grounds in the vicinity of the Mount Church, about 2,000 feet above the sea, many fine specimens of the indigenous trees and plants of China, Australia, and Japan, are to be found. These and others from the southern hemisphere, in all their changes, still retain their native seasons, our winter constituting their summer.

[1] The Spanish chestnut is one of the latest trees of Madeira, the leaves seldom appearing till May.

The *páu-branco*, mulberry, plum, orange, plane, and nearly thirty other kinds of wood, are used by the cabinet-makers, in making furniture, or in ornamental and inlaid work, in which they excel.

The indigenous flowers of Madeira are probably few in number, but many that have been introduced flourish in great perfection. The mutable rose, *Rosa mutabilis*, coral-trees, *Erythrinæ crista-galli* and *E. laurifolia*, oleander, camellia japonica, and all the laurel tribe, flourish in great luxuriance, and attain an enormous size. The myrtle, jasmine, fuchsia, honeysuckle, wild-rose, and geranium, cover the walls and fences; and the beautiful belladonna lily, *Amaryllis belladonna*, grows wild and profusely among the hills. The arum lily, *Richardia æthiopica*, — *Strelitzia regina*,—*Lilium candidum*, or white lily, *Amaryllis formosissima*, or Jacobin lily, datura, heliotrope, hibiscus, verbena, and passion-flower, abound in every quinta. And nearly fifty different species of ferns afford ample scope for the industry of the botanical collector.

CHAPTER VIII.

CLIMATE OF MADEIRA—METEOROLOGICAL OBSERVATIONS AND TABLES.

THE most remarkable feature of the island of Madeira is probably the mildness and equability of its climate, and its consequent beneficial effects on pulmonary and other complaints. These have been so fully treated of by the late Drs. Gourlay, Heineken, Renton, and other writers,[1] that further remarks would seem almost superfluous; still, any work on Madeira would be incomplete without a few observations on matters of such importance.

The editor of a late publication on the climate of Madeira,[2] has suggested that it is the province of the medical practitioners of the island to attend to meteorological observations, and thus prevent "the reproach of indifference, relative to the charge, sometimes urged against them, of withholding the truth, under a dread that the far-famed climate of the island will not bear the test of close and accurate examination." Notwithstanding the arduous nature of their professional duties, medical men

[1] See Appendix I.

[2] A Treatise on the Climate and Meteorology of Madeira, by the late J. A. Mason, M.D., edited by J. Sheridan Knowles. J. Churchill, London, 1850.

have ever been found the foremost in these investigations, and such a reproach in the present instance seems peculiarly unmerited.

Without advancing any pretensions to medical knowledge, or the physiological effects of climate, a residence of many years in Madeira, and a lengthened sojourn, in pursuit of health, among the most favoured localities of the South of Europe, enables the writer to add his testimony to the decided superiority of the climate of Madeira over all those he has visited. The purity of the atmosphere is neither impaired by smoke nor dust; cold winds or close sultry weather are little known, and a continuous summer may be enjoyed without suffering from extremes of heat or cold, or a continuance of damp or wet weather. Moisture never appears in mists or fogs, except on the mountains; and dews, though profuse at certain seasons on the higher grounds, seldom fall in Funchal. The heavy rains usually occur during the early spring and autumn, leaving the air clear and exhilarating. During the latter part of September, or early in October, the winds prevail from the west or south-west, accompanied by frequent and heavy showers. January, February, and March are the coldest months; during the two latter there is frequently snow on the hills for a few days together, but never descending below the level of 2,500 feet above the sea. The air in Funchal, however, although the thermometer may not denote a greater cold than 60° of Fahr., frequently feels chilly during

the time the snow remains on the mountains, and precautions are then necessary, though the cold is never so severe as to confine the invalid to the house. In Madeira there is little twilight; so soon as the sun sinks beneath the horizon, night closes in. The length of day is nearly the same throughout the year. During the summer the sun sets, at the latest period, about seven o'clock, and in winter, about an hour and a half earlier; with the same difference in his appearance above the horizon.

The late Dr. Mason, in his Treatise on the Climate and Meteorology of Madeira,[1] appears to have detected a greater degree of moisture in the atmosphere around Funchal, than is shown by the tables of other observers; and, while writing under the morbid influence of active disease, complained bitterly of the cloudy sky, the high winds, and the variability of temperature encountered in Madeira. The situation where his observations were made is notoriously one of the least favourable for that purpose in the outskirts of Funchal; and this circumstance, together with the fact of his hygrometer being placed in a close room, between two windows, near an open tank, and surrounded with trellised vines and vegetation, independent of the acknowledged severity of the season during which they were made, will sufficiently account for the difference existing between his observations and those of other parties. As regards the cloudy sky

[1] See a Treatise on the Climate and Meteorology of Madeira, by the late J. A. Mason, M.D. J. Churchill, London, 1850.

and high winds, the tables of Chas. M'Euen, Esq., published in the same volume, offer a sufficient refutation, as will be seen from the following summary:—

Comparative Force of Wind at Funchal, 1848-9, *deduced from Tables by C. M'Euen, Esq.*

1848-9. Months.	From Observations at 9 A.M.					From Observations at 2 P.M.					No. of Days.	No. of Observations.
	0.	1.	2.	3	4.	0.	1.	2.	3.	4.		
December.....	14	3	3	1	...	4	9	6	2	...	21	42
January	8	8	14	1	1	2	14	13	1	...	31	62
February	17	3	7	1	...	1	14	12	1	...	28	56
March	13	5	5	1	...	3	8	12	1	...	24	43
April.....	20	7	1	...	...	5	20	3	...	...	28	56
May	11	18	1	...	...	4	21	5	...	...	30	60
	83	44	31	4	1	19	86	51	5	0	162	324

0. Calms . . . in 324 observations occurs 102 times.
1. Light winds . . . . . 130 „
2. Fresh „ . . . . . 82 „
3. Strong „ . . . . . 9 „
4. Presumed gale . . . . . 1 „

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Comparative Appearance of the Sky at Funchal, deduced from Observations by C. M'Euen, Esq.

1848-9. Months.	Observations taken at 9 A.M.								Observations taken at 2 P.M.								No. of Days.	No. of Observations.
	B.	C.	R.	S.	O.	T.	F.	H.	B.	C.	R.	S.	O.	T.	F.	H.		
December.....	10	10	3	...	7	1	...	1	11	16	3	...	2	3	...	3	21	42
January.....	29	17	...	2	1	...	...	2	24	24	1	2	3	1	...	1	31	61
February.....	24	14	1	1	3	2	...	7	23	15	1	...	2	...	...	4	26	54
March	12	19	1	1	6	2	...	5	17	21	...	1	1	1	...	4	24	48
April.....	25	26	...	1	1	2	...	...	11	25	2	3	2	6	...	1	28	56
May	29	15	...	...	...	1	...	...	25	24	1	...	2	...	...	2	30	60
	129	98	5	5	18	8	...	15	111	125	8	6	12	11	...	15	160	321

In 321 observations these letters appear jointly and separately as follows :—

B.	Blue, or clear sky	240 times.
C.	Cloudy	223 „
R.	Rain	13 „
S.	Showers	11 „
O.	Overcast	30 „
T.	Threatening	19 „
F.	Foggy	0 „
H.	Hazy	30 „
		566

From the position of the island of Madeira, and the lofty and rugged nature of its surface, it will appear sufficiently obvious to every one conversant with the causes of the formation of clouds, and the trade winds, that the sky cannot be generally so clear, nor the atmosphere so calm as that of Italy. The preceding tables, however, though compiled during a season of unusual severity, "certainly one of the coldest for a great number of years,"[1] still afford a favourable result.

The trade-winds usually commence a few degrees south of Madeira; from this latitude their tendency towards the equator is so marked that they may almost be said to begin at this point. The northerly winds prevail at Madeira, on an average from eight to nine months in the year; but from their direct influence, the lofty chain of mountains, which traverse the island from east to west, afford a sufficient protection.

[1] See Mason's work on the Climate, &c. of Madeira, p. 223.

The warm and dry *Leste*, or east wind, analogous to the Sirroco, which blows from the coast of Africa, seldom occurs during the winter months at Madeira, and rarely lasts more than two or three days. During its continuance the heat is more oppressive in the upper districts than in Funchal, and in the summer frequently occasions langour and headaches, particularly with the more robust, or persons of a plethoric habit. From the effects of this wind, Dr. Mason appears to have drawn his chief or only deductions with regard to the effects of the climate of Madeira on invalids, and recommends "those who, on their arrival, find that the *Leste* agrees with them, to remove to a drier climate;" but without pointing out any more suitable spot; "while those with whom it materially disagrees may rest assured that they will derive permanent benefit from remaining." These observations must carry little weight with them, for in one case he himself appears to have "suffered very severely from the *Leste*, after being much exposed to its influence during some experiments on the subject;" and, on the other hand, "during the prevalence of the *Leste*," he says, "my spirits were very much exhilarated; and, although the temperature was 86°, I never felt any langour; but, on the contrary, such a general alacrity and vigour about the whole system as I never experienced under any other circumstances." [1]

[1] Mason on the Climate, &c. of Madeira, pp. 152, 156.

It is well known that medical men, in recommending their patients to resort to a milder climate, have many difficulties to contend against. The simple increase of temperature cannot be obtained alone, the invalid must be subjected at the same time to other meteorological changes. Whether the beneficial effects of these on disease be greater or less in Madeira, than in other climates recommended by the faculty, are matters which they are best able to decide.

The following meteorological tables form a summary of observations carefully made during 1850, and the first four months of the present year. Though considerably condensed and abridged, it is hoped they may still afford all the necessary information under their respective heads. They have been selected as affording a fair average of the climate of Madeira, in those situations usually chosen for the summer and winter residence of invalids. During the former season, from June to September inclusive, the observations were made in the valley of Machico, at an elevation of only 421 feet above the level of the sea. The instruments were placed at the outside of a window, having a north aspect, about ten feet from the ground, and protected from all currents of air, and reflected light, by being placed within a double frame of lath-work, covered outwardly with white oil-cloth, and lined with flannel; the inner compartment having flannel outwardly, and an interior lining of blue cloth. The two frames were sepa-

rated about an inch from each other, allowing a current of air to pass freely between them, and forming together a box about eighteen inches square, with a sloping roof; one side being of perforated zinc, and the front completely open towards the window, on the sill of which it was secured: the window being closed half-an-hour previous to each observation.

The readings during the winter months were taken at Mr. Wilkinson's boarding-house, a central position in Funchal; and the same precautions were observed. The window stood at an elevation of 132 feet above the sea, and 35½ feet from the ground, with an aspect E.N.E. and perfectly open.

The receiver, or funnel of the rain-guage, was situated at an elevation of 148 feet above the sea, and 49 feet from the ground, free from all eddies or counter currents, except those produced by the lofty hills sloping upwards towards the north.

The instruments, excepting the barometer, were all made by Casella & Co.[1] of Hatton-garden, and corresponded with each other.

[1] The writer can strongly recommend the various instruments made by Messrs. Casella & Co. If ordered for scientific purposes, their accuracy cannot be surpassed, and their charges are exceedingly moderate.

TABLE I.—*Showing the Mean Temperature for each day for Sixteen Months, from Observations taken at 8 A.M., 2 P.M., and 6 P.M.*

1850-1.	At FUNCHAL.					At MACHICO.				At FUNCHAL.						
Days of Month.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.
1	60.7	62.3	65.5	67.0	70.0	66.7	67.2	70.5	70.3	74.0	68.3	66.6	62.2	59.7	62.7	66.7
2	59.3	63.3	66.3	65.7	69.7	66.8	67.6	70.2	69.3	72.3	67.8	66.5	61.2	55.3	63.5	64.3
3	57.7	62.7	64.3	67.3	70.8	67.0	68.6	71.3	70.2	73.7	67.7	64.5	61.8	58.8	59.2	65.8
4	61.0	62.7	64.0	68.3	69.3	65.5	68.5	71.2	70.3	74.3	66.7	63.7	65.7	59.8	59.3	66.7
5	62.7	62.7	62.0	69.9	69.7	66.0	70.3	70.5	71.5	72.0	67.8	64.7	62.2	61.2	59.7	65.0
6	62.3	62.2	64.2	67.8	69.2	66.5	69.0	71.2	72.2	72.3	68.0	65.6	64.3	58.7	61.7	64.0
7	60.8	60.3	64.3	67.0	68.2	66.5	68.5	69.7	72.0	72.0	71.4	65.6	65.5	61.2	63.0	64.0
8	61.7	61.8	64.7	67.7	67.8	67.3	68.3	69.5	73.2	73.5	69.5	66.3	65.7	60.8	64.2	63.8
9	61.5	61.7	64.7	69.5	66.7	66.8	67.0	70.0	72.8	73.0	67.5	61.3	60.8	59.7	62.5	61.5
10	60.5	62.3	63.2	68.0	69.7	66.7	67.0	70.7	71.8	72.0	67.8	62.7	62.2	60.2	64.8	62.3
11	61.1	63.3	64.3	65.1	70.2	64.8	68.2	70.7	71.5	70.0	67.8	63.7	61.3	60.3	63.3	63 5
12	61.3	63.3	61.2	65.3	71.7	66.7	68.6	70.0	69.2	69.3	67.7	63.0	63.0	59.5	65.2	65.0
13	63.7	62.0	64.3	65.8	71.3	66.5	69.3	68.8	70.7	71.8	66.5	61.7	61.0	60.3	61.3	61.5
14	63.5	62.7	65.2	68.2	71.5	66.7	71.6	69.2	72.2	72.3	66.0	65.6	63.7	59.0	63.8	64.5
15	63.3	62.3	64.7	68.5	71.8	66.3	70.2	70.0	69.3	72.2	66.5	62.0	63.3	61.0	65.3	66.7
16	62.7	65.2	64.3	68.8	69.6	65.7	69.8	69.7	70.8	73.0	66.0	61.5	63.8	60.7	62.0	67.3
17	65.7	66.7	62.8	67.2	67.8	66.2	70.8	69.0	70.7	73.0	66.0	61.5	64.0	59.3	61.3	68.0
18	61.5	64.7	65.0	69.0	67.3	65.8	72.0	71.0	69.7	69.8	65.8	62.3	64.5	60.5	61.0	68.1
19	63.2	64.2	63.8	69.5	67.3	66.7	71.6	70.3	68.7	70.0	65 8	61.8	61.3	62.0	63.5	67.0
20	63.7	65.7	66.0	68.5	67.5	67.3	71.5	70.3	68.5	70.8	66.7	62.8	62.2	61.3	63.8	67.3
21	63.3	64.8	64.3	68.5	67.2	68.3	72.0	70.3	67.5	71.0	66.5	62.0	63.5	61.0	63.2	66.2
22	64.2	70.0	61.7	68.6	66.8	68.0	72.5	67.8	68.2	67.7	65.3	62.7	62.0	58.3	65.8	67.3
23	62.7	72.7	65.0	70.3	67.2	67.7	71.3	67.7	69.2	67.2	66.3	62.2	59.7	60.5	66.3	67.3
24	64.0	72.3	66.0	69.0	69.3	66.2	70.8	69.5	69.8	67.5	67.0	60.2	60.3	60.5	67.0	67.5
25	64.5	72.7	63.7	69.7	71.7	67.0	71.6	69.7	68.0	68.8	65.8	58.0	61.2	61.0	64.8	67.2
26	62.8	68.7	64.7	69.7	69.3	67.2	70.3	70.8	67.7	66.5	64.3	61.2	62.8	61.0	65.0	65.8
27	62.5	68.2	65.2	70.3	69.2	67.8	71.0	77.3	67.7	67.0	66.3	62.3	64.5	62.5	62.7	66.3
28	60.3	67.0	65.2	71.7	69.7	67.5	69.6	77.8	67.8	66.5	66.3	62.3	64.7	64.5	66.8	63.5
29	61.8	...	64.7	69.8	71.2	68.5	69.6	78.8	69.7	66.2	65.3	61.5	63.0	...	66.0	65.7
30	61.4	...	67.0	69.7	72.7	68.5	69.8	70.0	69.8	69.3	65.2	61.2	62.5	...	66.2	66.3
31	62.2	...	68.3	...	71.0	...	70.3	68.8	...	69.0	...	62.0	62.5	...	66.3	...
Mean...	62.18	64.94	64.63	68.35	69.43	66.84	69.82	70.71	70.01	70.58	66.85	62.80	62.78	60.31	63.57	65.54

TABLE II.—*Showing the Daily Range of the Thermometer, for Sixteen Months, from Observations taken at* 8 A.M., 2 P.M., *and* 6 P.M.

1850.1.	At FUNCHAL.					At MACHICO.				At FUNCHAL.						
Days of Month.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct	Nov.	Dec.	Jan.	Feb.	March.	April.
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.
1	3.0	5.0	5.5	3.0	9.0	4.0	1.0	4.5	6.0	3.0	4.0	3.0	6.0	2.0	4.0	6.0
2	9.0	5.0	4.0	6.0	1.0	5.0	3.5	3.5	2.5	4.0	6.5	6.5	3.5	5.0	8.5	5.0
3	7.0	5.0	3.0	6.5	4.0	7.0	4.0	4.5	3.5	4.5	7.5	6.5	7.5	10.0	5.0	5.0
4	6.0	5.0	6.0	3.0	7.0	4.5	4.0	4.5	4.5	2.0	4.0	6.0	7.0	9.0	3.5	5.0
5	10.0	5.0	5.0	4.0	7.0	4.0	5.0	4.0	3.5	5.0	3.5	7.0	7.0	9.5	6.5	5.0
6	10.0	11.0	5.5	6.5	7.5	2.5	3.0	2.5	4.5	4.0	7.0	1.0	6.0	8.0	4.0	5.0
7	10.5	8.0	6.0	6.5	9.5	3.5	4.5	4.5	4.0	5.0	5 5	3.0	5.5	9.5	6.0	8.5
8	9.0	10.5	9.0	9.0	5.0	4.0	4.0	3.5	5.5	2.0	8.0	5.0	8.0	7.5	5.5	6.5
9	6.0	6.0	9.0	3.5	5.0	3.5	3.0	5.0	4.5	3.5	4.5	1.0	7.0	8.0	8.0	3.0
10	10.0	4.0	8.0	6.0	9.0	4.0	3.0	6.0	7.0	8.0	4.0	9.0	5.5	9.5	6.5	9.0
11	10.0	5.0	4.5	11.0	8.5	5.5	2.0	5.0	5.0	8.0	3.5	8.0	9.0	7.0	5.5	4.0
12	8.0	7.0	3.5	5.0	6.0	4.0	2.0	4.5	4.0	2.5	7.0	4.0	6.0	5.0	6.5	7.0
13	5.0	5.0	7.0	5.5	5.0	4.0	2.0	2.5	5.5	4.0	4.5	7.0	7.0	5.0	3.0	5.5
14	7.0	8.0	3.0	7.5	6.5	5.0	4.0	3.0	4.5	2.5	8.0	9.0	3.0	6.5	5.5	6.5
15	9.0	6.0	9.0	5.0	8.5	3.0	2.5	3.0	6.5	3.5	3.5	9.0	7.0	8.0	6.0	7.5
16	6.0	5.5	5.5	1.5	2.0	1.0	1.5	4.0	3.5	1.5	9.0	5.5	6.0	3.0	3.0	7.0
17	7.0	2.5	4 5	6.5	4.5	3.5	1.5	3.0	5.0	6.5	9.5	4.5	4.0	2.5	5.0	5.0
18	8.0	6.0	3.0	9.0	4.0	2.0	1.0	5.5	4.5	3.5	9.0	6.0	7.5	7.5	3.5	8.0
19	7.0	8.5	6.5	8.5	4.0	2.5	4.0	4.0	4.5	5.0	9.0	4.0	3.0	8.0	5.0	6.0
20	7.0	5.0	6.0	7.5	4.5	3.0	3.0	5.0	1.5	5.0	8.0	7.5	3.5	7.5	5.0	5.0
21	9.0	7.5	7.0	6.0	3.5	4.0	3.0	4.0	3.5	5.5	6.0	4.0	6.0	6.0	4.5	6.0
22	7.5	6.0	6.0	8.0	5.5	3.5	1.5	5.5	5.5	5.0	7.5	4.0	6.5	9.0	9.5	3.5
23	6.0	3.0	6.0	10.0	5.0	4.0	3.0	2.0	5.0	4.5	6.0	3.5	8.5	5.5	3.0	4.0
24	4.0	1.0	6.0	7.0	4.5	2.5	2.0	3.5	4.0	4.5	7.5	3.5	8.0	9.5	6.0	2.5
25	3.0	2.0	4.0	6.0	9.0	2.0	2.0	3.0	5.0	4.5	6.5	4.0	6.5	6.0	4.5	4.5
26	5.0	6.0	6.0	5.0	4.0	2.5	3.0	6.0	4.0	1.5	5.0	5.5	8.0	5.5	8.0	7.0
27	5.0	6.0	6.0	10.0	3.0	2.5	2.5	5.0	2.0	2.0	5.0	9.0	9.0	7.5	8.0	3.0
28	7.0	5.5	5.5	6.0	4.0	2.5	3.5	3.5	2.0	1.5	6.0	4.0	7.0	9.5	8.0	6.0
29	5.5	...	5.0	2.5	4.0	3.5	3.5	3.5	2 5	3.5	8.5	9.5	5.0	...	5.5	2.5
30	7.0	...	5.0	8.0	4.0	3.5	3.0	4.0	3.5	6.5	5.5	8 5	5.5	...	6.5	5.5
31	6.0	...	6.0	...	6.0	...	3.5	2.5	...	6.5	...	4.5	7.0	...	4.0	...
Mean...	7.08	5.71	5.67	6.31	5.48	3.54	2.87	4.01	4.23	4.14	6.30	5.56	6.38	7.01	5.55	5.63

In Table I. the mean daily temperature of February 1850, is increased 1° 08 by a *Leste* of four days' duration; and that of August, 0° 84, by three days *Leste*. On these occasions the highest temperature observed during the day, by self-registering thermometers, was as follows:—

At FUNCHAL. 132 Feet above the Sea.		At MACHICO. 421 Feet above the Sea.		At St. A. DA SERRA, (Quinta das Amexieiras). 1,459 Feet above the Sea.	
1850.	deg.	1850.	deg.	1850.	deg.
February 22	75.0	August 27	81.0	August 27	84.0
,, 23	77.0	,, 28	83.0	,, 28	91.0
,, 24	74.0	,, 29	77.5	,, 29	80.0
,, 25	76.0				

TABLE III.—*Showing the Highest and Lowest Temperature, at the hours noted, exclusive of Leste, during each month, and the Monthly Mean of each hour, deduced from daily observations.*

1850-1.	8 A.M.			2 P.M.			6 P.M.			10 P.M.			Days of Leste.	Locality.
Months.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.		
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.		
January ..	61.0	51.0	58.72	70.0	61.0	66.13	64.0	58.0	61.69	60.0	53.0	57.46		
February .	66.0	55.5	60.73	72.0	65.0	66.89	68.5	58.0	63.68	63.0	55.0	58.37	4	Funchal, Machico, Funchal.
March	67.5	59.0	62.00	73.0	64.0	67.54	69.5	62.0	64.35	64.0	56.0	59.67		
April	69.0	57.0	65.00	75.0	68.0	71.31	71.0	61.0	68.75	66.0	61.0	64.56		
May	70.0	64.0	66.30	75.0	68.5	71.77	74.0	67.0	70.22	70.0	60.5	65.20		
June	68.0	64.0	66.38	71.0	67.0	68.78	68.0	62.0	65.38	67.0	63.0	64.33		
July	72.0	67.0	69.32	74.0	67.5	71.45	72.0	65.5	68.69	69.0	65.0	66.98		
August ...	72.0	67.0	69.50	74.5	67.0	71.92	69.5	65.5	68.19	68.5	66.0	67.22	3	
Septemb..	72.5	65.0	69.08	76.5	67.0	72.36	71.0	66.0	68.60	69.0	62.0	66.78		
October...	73.0	64.0	68.77	76.5	68.0	72.74	74.5	65.0	70.24	72.5	63.0	67.51		
Novemb..	68.5	61.0	63.93	74.0	67.0	70.16	72.0	64.0	66.46	66.0	61.0	63.71		
December	65.0	56.0	60.37	70.5	60.0	65.67	67.0	58.0	62.38	67.5	56.0	60.11		
MEAN OF YEAR			65.00	.....	.....	69.72	.....	.....	66.55	.....	.....	63.49	7	
January ..	63.0	55.5	59.90	70.0	63.0	66.21	65.0	59.0	62.21	63.0	56.0	59.38		
February .	61.0	54.0	57.50	69.5	61.0	63.98	64.0	53.0	59.46	60.5	53.0	57.01		Funchal.
March	65.0	56.5	61.27	71.0	61.5	66.74	67.0	58.0	62.71	62.5	55.0	58.96		
April	66.5	58.0	63.15	71.0	60.5	68.73	67.0	60.5	64.73	65.5	56.0	61.48		

TABLE IV.—*Showing the Highest and Lowest Temperatures registered during the Day and Night, for each Month, with the Mean Maximum, Mean Minimum, and Mean Monthly Range, deduced from daily observations, exclusive of "Leste."*

1850-1.	SELF-REGISTERING THERMOMETERS.						
	DAY.			NIGHT.			Mean of Monthly Range.
Months.	Highest.	Lowest.	Mean Maximum of Day.	Highest.	Lowest.	Mean Minimum of Night.	
	deg.	deg.	deg.	deg.	deg.	deg.	deg.
January	70.0	63.0	66.76	59.0	51.0	55.25	11.51
February	72.0	65.0	67.08	59.0	53.0	55.20	11.88
March	74.0	63.0	68.66	60.5	52.5	56.60	12.06
April	76.5	69.0	73.00	64.5	55.5	60.00	13.00
May	77.0	69.5	73.00	66.0	56.5	61.67	11.33
June	72.5	68.0	69.93	65.0	60.0	62.45	7.48
July	75.0	69.0	72.32	68.0	61.0	65.71	6.61
August	76.0	70.0	73.26	67.5	64.0	66.32	6.94
September	78.0	69.5	73.33	67.5	63.0	65.16	8.17
October	78.0	69.5	74.61	70.0	61.0	64.56	10.05
November	74.5	69.0	70.98	64.0	58.5	61.03	9.95
December	71.5	63.5	66.58	65.5	54.5	58.45	8.13
			70.79			61.03	9.77
January	70.0	64.5	67.59	60.0	51.0	56.46	11.12
February	69.5	58.0	64.89	58.5	52.0	54.18	10.71
March	71.0	63.0	67.60	60.5	51.5	55.35	12.25
April	74.0	65.5	69.55	65.0	53.0	58.81	64.18

TABLE V.—*Showing Table IV. with "Leste."*

1850.	DAY.			NIGHT.			Mean of Monthly Range.	Duration of Leste.
Months.	Highest.	Lowest.	Mean Maximum.	Highest.	Lowest.	Mean Minimum.		
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	
February	77.0	74.0	68.30	69.0	57.0	56.25	12.05	4 days.
August	83.0	74.5	74.00	73.0	72.0	66.90	7.10	3 ,,

TABLE VI.—*Mean of Hygrometrical Observations taken daily during each Month, at the hours noted.*

1850—1851.	Hours.	Dry-Bulb Thermometer.	Wet-Bulb Thermometer.	Difference.	Dew-Point.	Elastic Force of Vapour.	Weight of Vapour.	Quantity required for Saturation.	
		deg.	deg.	deg.	deg.	inches.	grains	grains.	
June	9 A.M.	64.33	59.25	5.08	55.2	.435	5.258	1.820	From Observations at Saint Ant. da Serra.
	2 P.M.	64.92	59.16	5.76	54.5	.424	5.145	2.065	
	7 P.M.	58.75	56.42	2.33	54.3	.421	5.175	.817	
July	9 A.M.	65.77	60.53	5.24	56.3	.451	5.454	1.927	
	3 P.M.	65.68	60.63	5.05	56.5	.455	5.491	1.890	
	7 P.M.	61.95	57.92	4.03	54.7	.427	5.212	1.345	
August	7 A.M.	65.19	58.92	6.27	53.9	.415	5.135	2.116	
	3 P.M.	67.20	61.02	6.18	56.1	.448	5.431	2.254	
	7 P.M.	63.04	57.52	5.52	53.1	.403	4.899	1.895	
September	8 A.M.	69.08	64.48	4.60	62.8	.566	6.662	1.473	At Machico.
	2 P.M.	72.36	66.06	6.30	61.6	.543	6.362	2.644	
	6 P.M.	68.60	64.33	4.27	60.7	.526	6.242	1.798	
October	8 A.M.	68.77	63.48	5.29	59.2	.500	5.963	2.101	From Observations taken at Funchal.
	2 P.M.	72.74	65.86	6.88	60.9	.530	6.228	2.888	
	6 P.M.	70.24	64.62	5.62	60.7	.526	6.222	2.196	
November	8 A.M.	63.93	58.33	5.60	53.8	.414	5.033	1.958	
	2 P.M.	70.16	62.35	7.81	56.9	.461	5.511	2.907	
	6 P.M.	66.46	60.38	6.08	55.5	.439	5.306	2.227	
December	8 A.M.	60.37	55.87	4.50	52.3	.398	4.802	1.473	
	2 P.M.	65.67	59.01	6.66	53.7	.412	4.998	2.362	
	6 P.M.	62.38	59.03	5.45	52.6	.400	4.836	1.804	
January	8 A.M.	59.90	55.30	4.60	51.2	.379	4.629	1.575	
	2 P.M.	66.21	59.37	6.84	53.9	.415	5.027	2.441	
	6 P.M.	62.24	57.40	4.84	53.5	.409	4.997	1.599	
February	8 A.M.	57.50	53.32	4.18	54.6	.356	4.410	1.363	
	2 P.M.	63.98	57.70	6.28	52.6	.400	4.830	2.183	
	6 P.M.	59.46	55.10	4.36	51.2	.379	4.633	1.483	
March	8 A.M.	61.27	55.17	6.10	50.3	.365	4.453	1.998	
	2 P.M.	66.74	59.19	7.55	53.2	.415	4.899	2.698	
	6 P.M.	62.71	56.71	6.00	51.9	.397	4.727	2.001	
April	8 A.M.	63.15	57.78	5.37	53.5	.409	4.988	1.828	
	2 P.M.	68.73	61.80	6.93	56.2	.450	5.403	2.661	
	6 P.M.	64.73	59.76	4.97	55.8	.444	5.377	1.787	

The mean value of the wet and dry-bulb thermometers, in the preceding table, for the months of June, July, and August, have been kindly furnished by Dr. Lund, from a register kept at the *Quinta das Amexieiras*, near Santo Antonio da Serra, 1,910 feet above the level of the sea.

The dew-point is deduced from the temperatures shown by the wet and dry bulb thermometers, according to the following Table of Factors, given in the "Greenwich Magnetical and Meteorological Observations, 1844."

Readings of Dry-Bulb Thermometer.	Factor.	Readings of Dry-Bulb Thermometer.	Factor.
Between 28 deg. and 29 deg.	5.7	Between 40 deg. and 45 deg.	2.3
,, 29 ,, 30 ,,	5.0	,, 45 ,, 50 ,,	2.2
,, 30 ,, 31 ,,	4.6	,, 50 ,, 55 ,,	2.1
,, 31 ,, 32 ,,	3.6	,, 55 ,, 60 ,,	1.9
,, 32 ,, 33 ,,	3.1	,, 60 ,, 70 ,,	1.8
,, 33 ,, 34 ,,	2.8	,, 70 ,, 80 ,,	1.7
,, 34 ,, 35 ,,	2.6	,, 80 ,, 85 ,,	1.6
,, 35 ,, 40 ,,	2.4	,, 85 ,, 90 ,,	1.5

The difference of the two temperatures is multiplied by the proper factor, and the product subtracted from the temperature of the air gives the dew-point.

The elastic force of vapour is taken from the table recommended by Sir John Herschel, in the "Admiralty Manual of Scientific Inquiry, 1849."

The column of *Weight of Vapour* shows the quantity, in grains, existing in a cubic foot of air; and the last column, the quantity, in grains, re-

quired to saturate the same space at the existing temperatures. These calculations have been made from tables given in Professor Daniel's work on Meteorology.

TABLE VII.—*Showing the Mean Height, and Extreme Range of the Barometer, during each Month; the number of Days on which Rain fell, with the quantity in Inches; and the comparative Force of the Winds, from daily observations.*

1850-1. Months.	Barometer.		Pluviometer.		Comparative Force of Winds.						Total of Days.
	Mean.	Extreme Range.	Days on which Rain fell.	Quantity in Inches.	0	1	2	3	4	5	
January	29.91	0.69	3	1.655	10	9	7	3	2	...	31
February ...	30.05	0.59	1	.094	4	10	10	3	1	...	28
March	29.98	0.46	9	3.630	2	9	14	4	2	...	31
April	29.91	0.66	2	.840	5	5	13	6	1	...	30
May	30.00	0.33	5	1.775	4	10	11	6	...	...	31
June	29.49	0.22	6	.420	3	12	11	4	...	...	30
July	29.55	0.29	4	...	4	11	9	7	...	...	31
August.....	29.56	0.21	5	...	2	10	12	6	1	...	31
September .	29.66	0.36	10	...	10	9	7	4	...	...	30
October	29.97	0.77	12	5.607	4	11	8	7	1	...	31
November .	30.17	0.29	1	.090	8	8	9	5	...	...	30
December ..	30.11	0.70	8	6.877	4	8	7	7	4	1	31
MEAN...	29.86	0.46	66	20.994	60	112	118	62	12	1	365
January	30.20	0.72	3	1.529	9	10	8	4	...	...	31
February ...	30.02	0.75	12	5.355	10	7	2	5	3	1	28
March	30.25	0.33	0	...	7	14	7	3	...	...	31
April.....	29.93	0.72	10	3.800	6	12	5	5	2	...	30

The preceding Table shows the quantity of rain for Funchal only. The slight summer showers, passing over the more elevated positions above Machico, have been duly registered in the column of days on which rain fell, although the quantity

has not been ascertained. During the months of July, August, and September, there was no deposit in the "rain gauge" at Funchal.

The readings of the barometer for the first four months are taken from the observations of Drs. Heineken and Renton, ninety feet above the sea, during the six years from 1826 to 1831.

The comparative force of the winds are registered by numbers; viz.—

0 denoting calm.		3 denoting fresh breeze.	
1 „	light air.	4 „	strong or violent wind.
2 „	gentle breeze.	5 „	moderate gale.

TABLE VIII.—*Showing the number of Days in each Month during which the different Winds prevailed.*

1850-1. Months.	N.	NN.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	SS.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	NN.W.	Days.
January	5	...	7	2	6	5	...	...	...	...	1	1	1	...	3	...	31
February	...	...	4	2	11	6	4	...	1	...	...	...	...	...	...	...	28
March	6	1	4	...	...	...	...	...	1	1	...	...	3	2	10	3	31
April	4	...	8	...	1	...	1	...	...	...	1	1	3	3	7	1	30
May	2	...	4	1	2	...	...	...	...	1	1	2	6	1	4	7	31
June	10	2	12	1	...	...	...	...	...	...	...	...	...	...	1	4	30
July	4	2	15	4	...	1	...	...	...	...	...	...	1	...	3	1	31
August	5	9	12	...	...	1	3	...	...	...	...	...	...	...	...	1	31
September	5	3	6	1	...	1	...	...	...	...	1	1	2	...	6	4	30
October	7	5	6	2	...	1	...	...	...	1	1	2	...	2	2	2	31
November	4	2	8	3	6	2	...	4	...	...	...	...	...	1	...	...	30
December	6	2	12	1	1	...	...	...	...	1	2	2	...	2	1	1	...	31
MEAN	58	20	98	17	27	17	7	5	...	3	5	7	7	18	10	37	23	365
January	4	1	4	...	2	...	...	1	...	...	...	...	2	1	4	2	10	31
February	4	...	7	3	1	4	...	...	2	1	...	...	...	2	1	2	1	28
March	6	1	17	1	2	...	...	...	...	...	...	...	...	...	...	4	...	31
April	6	1	7	...	...	...	...	...	...	2	...	...	3	...	4	6	1	30

From the position of the basin of Funchal, open only towards the south, it is difficult to ascertain

the true course of the winds; and the different eddies or currents, caused by the vicinity of the mountains, renders either a vane or anemometer of little use. The direction of the winds, in the preceding Table, have been registered from the "*carry*" of the lower strata of clouds, or from the course of the country boats passing the Brazen-head. During the continuance of North and North-East winds, a gentle westerly breeze, or back current, usually blows into the bay of Funchal.

The mean temperature of Malaga, given in the following Table, has been deduced from observations made during 1850, by Dr. Shortliff, who has resided there for some years, and to whom the author is indebted for the table which will be found appended.[1]

The temperature of Madeira for 1850, in the same table, is taken from the mean maximum and mean minimum, obtained by self-registering thermometers, as given in Table IV., from observations made at Funchal during the winter, and at the *Quinta da Sant' Anna*, above Machico, during the months of June, July, August, and September. The preceding temperature, throughout the year, applies to Funchal only, and has been obtained, with those of the other localities, from Sir James Clark's work on Climate, to which the reader is referred for more concise and general information regarding the various places resorted to by invalids during the winter.

[1] See Appendix K.

TABLE IX.—*Mean Temperature of various Climates for the whole Year, and for each Month.*

Places.	Year.	January.	February.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.
London.....	50.39	37.36	40.44	42.64	48.00	55.64	60.00	63.43	63.52	58.80	51.78	43.47	39.58
Torquay.....	52.12	43.60	41.90	45.15	50.90	54.20	61.15	61.75	60.90	57.35	53.05	48.95	46.65
Cove.....	51.93	43.30	44.45	46.13	49.06	55.34	59.97	61.76	62.36	57.00	52.03	47.01	44.84
Penzance	51.80	42.50	43.50	46.40	48.50	54.00	58.50	61.20	60.90	57.60	53.70	48.80	46.10
Undercliff.....	51.35	41.46	40.58	44.14	49.57	54.27	59.47	60.20	62.24	59.59	52.80	48.35	43.63
Clifton	51.26	38.87	39.25	43.62	49.50	56.25	63.50	64.25	63.87	58.62	50.87	45.00	41.62
Jersey	53.06	41.58	44.62	45.75	50.09	57.08	61.31	63.50	63.72	59.82	55.65	48.42	45.27
Pau	56.18	41.20	43.60	48.80	51.80	61.60	68.20	70.60	73.40	67.40	58.20	46.60	42.80
Rome	60.70	47.65	49.45	52.05	56.40	64.50	69.17	73.30	74.02	69.50	63.60	58.80	49.62
Naples	61.40	46.50	48.50	52 00	57.00	65.50	71.00	75.00	76.50	72.50	65.00	54.50	50.50
Pisa	60.60	44.00	48.11	51.52	56.30	63.75	70.50	77.50	77.50	73.50	62.62	52.30	47.00
Nice	59.48	45.81	49.00	51.45	57.00	63.00	69.00	73.50	74.30	69.35	61.85	53.70	48.60
Florence	59.00	41.00	45.00	48.00	56.00	64.00	69.00	77.00	76.00	70.00	59.00	53.00	47.00
Malta	67.80	56.50	56.30	58.10	61.80	67.40	73.80	79.60	81.20	77.30	71.10	64.20	59.00
Malaga	66.07	55.43	56.03	59.06	62.20	65.80	74.73	77.73	78.02	74.70	70.57	61.93	56.63
Madeira ..... Funchal...	64.96	59.71	60.28	61.86	62.03	63.44	66.90	70.04	71.88	71.28	66.76	63.96	61.44
Ditto, 1850.....	65.91	61.00	61.14	62.63	66.50	67.33	66.19	69.01	69.79	69.24	69.58	66.00	62.51

CHAPTER IX.

SALUBRITY OF THE CLIMATE.—ITS EFFECTS ON PULMONARY DISEASES.

In a work like this, intended as a guide for invalids visiting Madeira, it is unnecessary to give a detailed account of the diseases to which the natives and foreign residents are liable; but the following brief remarks, obtained from a medical friend of the author, may not be considered out of place, as bearing on the subject of the salubrity of the climate of the island.

The result of all the observations obtained by Sir James Clark on the climate of Madeira, and the other foreign resorts of English invalids, is in his own words,—"It (Madeira,) is warmer during the winter, and cooler during the summer; there is less difference between the temperature of the day and that of the night, between one season and another, and between successive days: it is almost exempt from keen, cold winds; and enjoys a general steadiness of weather, to which the continental climates are strangers."

Such a climate ought to be a healthy one, and the experience of many who have tried it, and of many who are now trying it, as well as the testi-

mony of Englishmen who have been settled here in business during many years, will bear out the conclusion.

There are no diseases that can be said to be peculiar to Madeira: and, although the inhabitants are subject to many of those common to more northern latitudes, these, in general, assume a mild form. One or two diseases of the skin, however, that are not met with in England, but are common in warm climates, are seen in Madeira;—such are Elephantiasis and Lepra, of which loathsome diseases the hospital Saõ Lazaro contains many cases, and it is not difficult to discover their origin in the poor living and destitution among the lower classes, combined with the warmth of the climate, and the neglect of cleanliness in their persons and habitations.

A fact well known to medical men, and to most of the English residents who have reared families in the island, is the remarkable exemption enjoyed here from most of the complaints to which children are exposed in England during the early years of life, and the ease with which infants get over the period of teething—a time of great anxiety to mothers in general. Yet there is no doubt that the alternations of temperature in such a climate as that of England have a bracing effect, and children who are originally of healthy constitution, and brought up there, are more robust in after life.

Zymotic diseases, as they are called, (measles, scarlatina, &c.,) are seldom met with in Madeira;

and when an epidemic of any of these does occur, the disease appears in a much milder form than we generally see in England.

During one season, a few years ago, the small-pox proved extensively fatal among the natives, but its introduction was clearly traced to the crew of a vessel from abroad, and occurred also at a time when the sanitary regulations of the port did not exist, or were carelessly enforced.

Inflammatory fever is seldom met with, but a mixed fever, of a typhoid type, frequently makes its appearance toward the end of the summer; it occurs only in detached cases, and appears to possess nothing of a contagious nature, but not unfrequently proves fatal. Inflammatory affections of the bowels are not uncommon among the lower classes, caused chiefly, as Dr. Gourlay long ago remarked, by the poor people, when overheated and fatigued by their incredibly laborious occupations, imprudently drinking copiously of cold water.

Dysentery, a disease so fatal in tropical climates, is not unknown in the severe form familiar to our medical practitioners in the East and West Indies; nevertheless, at certain seasons, and especially during a season of scarcity of provision that occurred about three years ago, the disease proved frequently fatal among the ill-fed and ill-clothed poor.

A mild *Diarrhœa* occasionally annoys the stranger on his arrival from a cold climate, but this cannot be said to be in any way peculiar to

Madeira, as it is well known that the traveller is liable to be subjected to the same complaint on first taking up his residence in any part of southern Europe, or even in any of the continental towns. This may be the consequence simply of change from the mode of living on board ship to that on shore, combined with the increased temperature, or the result of imprudence; but it certainly is not the lot of every stranger on his arrival here. Dr. Watson, speaking of this kind of Diarrhœa, says, "An article of diet which is perfectly wholesome and digestible, and which the stomach bears well after a little habit, will sometimes cause griping and purging, when it is taken for the first time. . . . . I do not know that it is so, but I think it very likely that Frenchmen, and Germans, and Italians, suffer in the same way when they first come to this country (England,) and adopt our habits and regimen."—*Lectures on Practice of Physic.*

The stranger who may be in perfect health, or the invalid landing in Madeira in search of health, are alike subject to this kind of Diarrhœa, which, it must be remembered, is a very different thing from that morbid relaxation of the bowels to which many of the latter class of visitors are liable, and which is one of the symptoms of their disease, *Consumption*, and very frequently accompanies its advanced stage.

Acute rheumatic affections, with their usual and dangerous concomitant, disease of the heart; are

very uncommon in Madeira, and chronic rheumatism, which so often cripples and disfigures the sufferer in England and other northern countries, is almost unknown. The greatest benefit is derived from a short residence here by patients labouring under the latter form of rheumatism.

The sedentary habits of the better class of the Portuguese render them very liable to hemorrhoids, as well as nervous dyspeptic complaints.

Although the climate of Madeira is so very equable, it is not altogether free from changes, which constitute here, as well as elsewhere, the exciting cause of pulmonary and inflammatory affections. These, however, as may be supposed, are comparatively rare among the better classes, and occur chiefly among the hard-working poor, who are more exposed to this cause, and to sudden chills of the surface while perspiring profusely. An epidemic catarrh not unfrequently makes its appearance about the months of August and September, or before the annual rains, which usually occur in October.

It is now pretty well understood that no climate affords entire exemption from scrofulous diseases. Whenever the exciting causes are applied, in whatever part of the world, these diseases manifest themselves; pulmonary consumption is connected with what is called the scrofulous diathesis, and occurs among the natives of Madeira, but prevails much less among them than it does among the natives of more changeable climates. That it

should occur is not to be wondered at when we find many of the causes of the scrofulous diathesis in full operation among a large proportion of them. These causes are chiefly imperfect food and clothing in childhood and youth, and deficiency of fresh air in their low, damp dwellings or huts, combined with over-exertion. It should also be remembered that the natives of Madeira must be subject to consumption when the exciting causes are applied, for a reason given by Dr. Alison, who, speaking of the natives of warm climates, shows that the long-continued applications of heat in early life are weakening, and therefore favourable to the formation of the scrofulous habit; and it is found by experience that they are (both white and black,) peculiarly liable to scrofulous diseases when they come to colder climates.

With regard to the effects of the climate of Madeira on pulmonary disease, the following valuable information, which has been kindly furnished by Dr. Lund, will be found interesting to the medical profession generally, as well as to those who are in search of health, or who may be interested in others requiring a change of climate.

"Consumption has long been known as one of the most fatal diseases occurring in Great Britain, and this great and well-known fatality is plainly shown in the following extract from Banfield's *Statistical Companion for* 1850:—"The reports of the Registrar-General show that in one year, in England and Wales, 59,025 died from consump-

tion, being 18.2 per cent., or nearly one-fifth of the entire mortality.' "

Sir James Clark, from collecting the observations of different standard authorities, estimates the ordinary duration of this disease to be from nine months to two years: that is, from the first consumptive symptom being observed until the disease ends fatally—all its different stages are passed through in this short period.

We also find in *The First Medical Report of the Brompton Hospital for Consumption* the following Table of 215 fatal cases:—

	QUARTERLY PERIODS.				HALF-YEARLY PERIODS.								
	Under 3 Months.	3 to 6 Months.	6 to 9 Months.	9 to 12 Months.	12 to 18 Months.	18 to 24 Months.	24 to 30 Months.	30 to 36 Months.	36 to 42 Months.	42 to 48 Months.	Above 4 Years.	Doubtful.	Total.
Both Sexes.	1	22	36	30	34	22	23	6	9	4	14	14	215
Per cent.....	...	10.2	16.7	13.9	15.8	10.2	10.5	2.8	4.2	1.8	6.5	6.5	...

Thus, there occurred within one year 89 deaths; within 18 months 123; and within 30 months as many as 168 out of 215; leaving alive at that period the small number of 47.

In the midst of such calamitous results a cheering gleam of hope broke forth, when, during the endeavours of different medical observers to ascertain the cause of death in various diseases, it was found that consumptive disease had existed where it had not been suspected, and that nature had been busily occupied in making efforts towards

a cure, and this, too, under unfavourable circumstances. These observations, though few in number, being well authenticated, established the fact, that consumption was not always fatal; and further experience has fully proved that persons coming, for various periods of time, to such a climate as Madeira in the early, or occasionally in the advanced stages of the disease, have their complaints arrested, where they have the prudence to conjoin proper regimen and treatment with the effects of climate. In all stages the most distressing symptoms are, almost invariably, so much ameliorated as to cause comparatively little inconvenience, and where this relief does not occur the case is an exception to the general rule. Even in the most advanced stages the downward progress of the disease is much retarded, all the distressing symptoms ameliorated, and the patient has the great advantage of freely inhaling a balmy atmosphere out of doors, which gives much relief. The great majority are thus enabled to pass with comfort their remaining term of life, and can generally take out-of-door exercise, or sit in a garden, until a day or two before finally sinking.

This affords a great contrast to what the invalid suffers at home, where, being necessarily confined within doors, and deprived of many enjoyments, he passes through a long and dreary winter in an artificially-heated and vitiated atmosphere—no mode of warming apartments being ever free from an oppressive closeness, which is not felt in the

open air. Persons in England may delude themselves into the idea that it is possible to make an artificial Madeira climate, but they may rely upon being mistaken. No means as yet discovered can compensate for a natural, mild, and pure atmosphere, affording opportunities of regular daily exercise.[1]

In order to illustrate as correctly as possible the effects of the climate of Madeira on consumptive disease, I have arranged 100 cases from my notebook, and as nearly as possible in the order in which they are entered. The progress of the disease I have divided into three stages, viz.—

1st. Where the lung is not broken down.
2d. Where the lung has begun to break down.
3d. Where the lung is greatly broken down.

In the first class, all had some of the symptoms and signs appertaining to consumption, and most of them were sent out by expert Stethoscopists either as actually diseased or strongly threatened. Some had their lungs extensively solidified; a few, probably, had not genuine tubercular consumption, but had so much induration of the lung, accompanied with untoward symptoms, as to leave no doubt

[1] In the Hospital for Consumption at Brompton, where an artificial Madeira climate is attempted, and most likely carried out as successfully as artificial means will allow, an oppressive warmth is felt. And the fact of two of the Assistant Physicians to that Institution, when invalided, having come to Madeira, shows that medical men in their own cases fully appreciate the advantages of a warm natural climate.

TABLE *showing the number of Patients in* 100 *Cases of Consumption, in whom the disease was Arrested, Progressed, and proved Fatal; with the Duration of the Disease from the date of their first landing at Madeira.*

Stage upon Landing.	Number of Cases.	Arrested.	Duration of Arrestment.	Progressed.	Result of Cases Progressed.	Duration of Disease from First Landing at Madeira.
I.	48	37	13 for 4 to 10 years. 2 for 3 years. 11 for 18 to 20 months. 11 for 7 to 12 „ In 2 cases relapses occurred.[1]	11	6 Living	3 Passed in 14 months into the Third Stage, and slowly progressing. 3 Passed in 16 months, 2 years, and 5 years, respectively, into the Second stage.
					5 Died...	1 Died 5½ months after landing. 1 Remained one winter at Madeira, and died the next abroad. 1 Came out for 7 winters, and then died. 1 Remained nearly 8 winters, and then died. 1 Remained one winter, and returned home; supposed to be dead.
II.	24	5	1 Arrested for 15 months, relapsed and passed into the Third Stage; disease again stopped, and for 3 months general health as good as before the attack. 2 For 15 months. 1 For 5 years. 1 Came out about 10 years ago, relapsed in 1847, disease again arrested, and continues so.	19	8 Living	2 Much ameliorated. 4 Still in the Second Stage, but the disease is slowly gaining ground. 2 Are in the Third Stage; in one the disease is arrested, and general health good.
					11 Died	1 Remained one winter, and, having left the island in a sinking state, is supposed to be dead. 4 Remained one winter at Madeira, and died the next at home. 2 Died at home, 8 months after first landing in Madeira. 1 „ 10 „ „ „ 1 „ 12 „ „ „ 1 Died at Madeira, 14 months after first landing. 1 „ 4 years „ „
		1				

III.	28	5	1 Has remained so for upwards of 12 years. 2 For 8 years. 2 Left the island 3 years since, and still remain well.	23	5 Living	1 Arrested for 14 months, and then began slowly to progress. 1 Has progressed slowly for 15 months. 3 Remained one winter, and then left the island, their only symptoms being moderate cough and expectoration.
					18 Died	1 Died 48 hours after landing. 1 „ 6 weeks „ 1 „ 7 „ „ 1 „ 9 „ „ 3 „ 3 months „ 1 „ 3½ „ „ 2 „ 4 „ „ 1 „ 5 „ „ 1 „ 6 „ „ 2 „ 7 „ „ 1 „ 10 „ „ 1 Died 15 months after first landing; having gone home during the summer, and returned to Madeira, died suddenly three months afterwards. 1 Died 4 years after first landing. 1 Came to Madeira 13 years ago, and remained 7 winters, went home for 3 years, returned to Madeira for 3 winters and 2 summers, and then died at home.
	100	47		53		

TOTAL, Living 66
„ Dead 34
100

[1] One of these cases was sent to Madeira as *in the last stage;* but being only able to discover that the lungs were extensively solidified, not broken down, I entered the case as in the first stage. The patient has returned to Madeira, and the disease is again arrested.

doubt, that, had they not left England, they most assuredly would, sooner or later, have died phthisical. Some cases marked in the second stage, might, with propriety, have been placed in the third, but I reserved this last for the very advanced cases, and where distinct evidence of a large cavity or cavities existed.[1]

These cases show, that, in the early stage, a patient coming to Madeira has a very fair chance of having the disease permanently arrested, or, if more advanced, of gaining a prolongation of life, and avoidance of many distressing symptoms. The actual duration of the disease is not given; in England its utmost extent is two years. The cases coming to Madeira in the more advanced stage were composed of those who had tried other places, and came here as a last resource; and the whole are marked, not from the first invasion of the attack, but from the date of their landing. There are other cases not mentioned in the Madeira table that have been sent out as *hopeless cases*, and are now living here in the enjoyment of good health, and have done so for ten years and upwards.

[1] See Table in preceding pages.

CHAPTER X.

MEANS OF REACHING MADEIRA—OUTFIT—CURRENCY—MAILS—PASSPORTS—LANDING—CUSTOM-HOUSE.

THE conveyances to Madeira were formerly few, tedious, and ill-suited for invalids; and the accommodation for visitors on their arrival was far from satisfactory; only one or two boarding-houses existed, and these of a very mediocre description. This want, however, was in many cases compensated by the kind hospitality of the English merchants, whose doors were ever open to receive those recommended to their attentions; and whose princely entertainments, during the flourishing state of the island trade at that time, are still looked back upon with grateful recollections by many.

These disadvantages no longer exist. From the small number who resorted to Madeira only twenty years ago, the annual arrivals have now increased to from 300 to 400 persons. The opportunities of reaching the island are frequent, and the means of conveyance of a very superior description. The increase of accommodation has also kept pace with

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the influx of visitors, and now affords every comfort that the most fastidious could desire.[1]

Several fast-sailing vessels, built expressly for the trade between England and Madeira, commanded by experienced seamen, and fitted up with every regard to the accommodation and comfort of passengers, leave Southampton at stated intervals direct for Madeira, and accomplish the voyage, under ordinary circumstances, in from eight to twelve days. These are—

The brig *Brilliant*, of 373 tons register; Captain J. B. Calbeck. Agents: Messrs. H. & C. Toulmin, 31, Great St. Helen's, Bishopsgate-street, London; Mr. T. Hill, Oriental-place, Southampton; and Messrs. Jos. Phelps & Co., Madeira.

The brig *Comet*, of 260 tons; Captain J. Airth; and the brig *Eclipse*, of 246 tons; Captain C. B. Davis. Agents: Messrs. Rayden & Reid, 3, Sun-court, Cornhill; Mr. N. M. Priaulex, Southampton; and Messrs. Stoddart & Co., Madeira.

The brig *Dart*, of 242 tons; Captain J. Bell. Agents: Mr. T. Stephings, 3, Walbrook-buildings, London; Mr. J. W. Deal, 80, High-street, Southampton; and Mr. J. H. Hollway, Madeira.

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[1] How much ignorance prevails in England on this subject may be gathered from the fact, that an eminent authority on diseases of the chest, on being consulted in London by a friend of the author, during the last season, with regard to the eligibility of Madeira as a winter residence for his disease, remarked that invalids in Madeira were deprived of all the comforts they enjoyed in England. That Madeira had its winter, as well as England; and during that season there were few days on which an invalid would be able to sit in the house without a great-coat over his shoulders!!

The first of these vessels was originally intended for a pleasure yacht; has a flush deck, and accommodation for 54 passengers; she sails nearly every month, from Southampton only.

The others have raised quarter-decks, sail fast, and have accommodation for about 45 passengers each. One or other of these vessels sail, on an average, nearly every fortnight from London, and call at Southampton for passengers.

These packets are all fitted up with family and double-berthed cabins, well ventilated, with good bedding, and even the luxury of a bath-cabin. The attendance on board is truly excellent, and the table is most liberally and plentifully supplied, including wines, porter, ale, &c. and in fact all the comforts that could be desired. The passage-money is 17*l.*; children and servants, 10*l.* each.[1] A small gratuity is usually given to the stewards of about 10*s.* for each passenger. The regular period for the sailing of these vessels will be found in the second column of the *Times* newspaper.

Besides the regular *Madeira Packets*, the lately established line of Royal Mail Steamers to Brazil, sail from Southampton at half after eleven o'clock in the morning of the 9th of every month, and, proceeding by way of Lisbon, are due at Funchal on the morning of the 18th. The voyage to Lisbon usually occupies about four and a half days; at this port they remain twenty-four hours, and

[1] Where there are several children, a reduction is usually made in the fare.

twelve hours at Madeira. The passage-money by these steamers is as follows :—

From Southampton to Madeira,	Each Passenger.
Single berthed after cabins . . .	£30
ditto fore cabins . . .	25
Double-berthed after cabins . . .	22
ditto fore cabins . . .	20

From Lisbon to Madeira, 35 dollars = 7*l.* 17*s.* 6*d.* at 4*s.* 6*d.* per dollar, or according to the current exchange at Lisbon.

Female servants are charged two-thirds; male servants, and children between the ages of eight and twelve years, one-half; and children between the ages of three and eight years, one-quarter of the usual fare; children under three years of age, free.

These charges are exclusive of wines, &c., and luggage is limited to twenty cubic feet to each passenger. The agents are—

The Royal Mail Steam Packet Company, 55, Moorgate-street, London;
Mr. Duffel, Company's Office, Winkle-street, Southampton;
And Messrs. Gordon, Duff & Co. Madeira.[1]

Opportunities of reaching the island by East and West India merchant ships, sailing from London, Liverpool, or Glasgow, and touching at Madeira on their outward voyage, frequently offer during the autumn, but, though usually of larger

[1] These steamers return to England, *viâ* Madeira and Lisbon, and are due at Madeira on the third of each month. Return tickets are issued, with an abatement of 25 per cent. on the passage money, and permission to remain at Madeira for the whole or any portion of the season.

tonnage than the regular traders, the comforts are by no means equal, and the passenger is required to furnish his own bedding, &c., the cost of which is usually from 3*l.* to 4*l.* Their sailing is frequently put off from day to day; and their usual or average passage is considerably longer than that of the other sailing packets.

A fine first-class brig, the *Galgo*, of 248 tons, Captain Avellar, sails from Lisbon for Madeira about once a month; this vessel is fitted up with a degree of comfort almost equal to the English traders, and performs the voyage in from four to six days. The passage-money is 5*l.* 5*s.* including a well-supplied table, wine, bedding, &c. The agents are Mr. James Wardrop, 18, Little Tower-street, London; Mr. C. A. Munro, Lisbon; and Messrs. Freittas, Abreu & Co. Madeira. The Peninsular Steam Packets, which leave Southampton for Lisbon on the 7th, 17th, and 27th of every month, render this an easy and agreeable route to those who are in no hurry to reach the island. The agents for the *Galgo*, at Lisbon, will attend to the clearance of luggage, &c. for those parties proceeding by their vessel to Madeira.

The dock charges at Southampton on luggage are very trifling, averaging about 3*d.* per package, which is paid at the gate on entering.

It is by no means necessary for invalids, or others proceeding to Madeira, to lay in a large supply of clothing. Such articles as are worn in England during the spring, are quite suitable for

the winter in Madeira; and lighter clothing, should it be found necessary, can be obtained equally as good, and quite as cheap as in London. Calico shirts are better suited to the climate than those of linen; and flannel underclothing should not be omitted.

It is recommended that each passenger, previous to embarking, provide himself with a receptacle for his brushes, and other articles of the toilet, to prevent their rolling about with every motion of the vessel. This can easily be prepared with a small square of brown-holland, having a double row of pockets sewn on to it, and fastened with a small nail at each corner, in some convenient part of his cabin. One or two good table bells will be found useful to those who purpose occupying furnished houses.

With regard to money-matters, it will be found judicious to carry out, in specie, as much as will cover the expenses of some months' sojourn, and thus save much trouble, as well as the loss which is frequently sustained in the exchange on bills, often amounting, with commission, &c., to three and even five per cent. A letter of credit, however, may be found useful, and one or two of introduction are all that is necessary.

Mexican and Spanish dollars, as well as English and American gold and silver coins, are current in Madeira, at fixed rates. The only Portuguese coins in circulation are those of copper, the others being Spanish pistareens, or 10*d.* silver pieces, and

those already mentioned. A table of the island currency will be found appended.[1]

The mails for Madeira are made up in London on the morning of the 9th of every month, for the Brazil packet sailing from Southampton. Letters, &c., are also forwarded *viâ* Lisbon by the Peninsular mails, if specially so addressed, but this conveyance is uncertain, and not to be recommended, as they frequently remain a long time at Lisbon, there being no *regular mail* from thence to Madeira.

The postage must be prepaid, on letters not exceeding half-an-ounce 1*s.* 10*d.*, and on newspapers 2*d.* each. A letter-bag is also made up at the office of the respective *traders;* if delivered there, they are forwarded free of charge; when sent through the Post-Office, and specially endorsed for these vessels, a postage of 8*d.* must be paid. A like sum is also charged on all letters delivered at the Post-Office in Madeira. Newspapers are delivered at the British consulate, free of charge.

Invalids, and other passengers, proceeding to Madeira, usually desire to leave England in the latter part of September, or early in October, in consequence of which the application for berths by the sailing packets, is greater at that period than at any other season, and renders it advisable to make an early selection, at all events where there are several members of a family who desire to be together. To secure a passage, a deposit, or rather

[1] See Appendix L.

payment of one-half of the fare becomes necessary, the other moiety being paid before embarking. The agents will furnish parties with a plan of the cabin of their respective vessels, on application by letter or otherwise.

For those proceeding direct to Madeira, passports are not at all necessary, as no impediments whatever are thrown in the way of passengers landing, but a charge or fine of 1.200$^{rs.}$ = 5*s.* for the omission, is exacted by the police authorities when they furnish the permit-of-residence, or the passport which is required by all persons on leaving the island. It is preferable, however, to submit to this exaction, and avoid the payment of ten shillings for a passport in England.

The usual charge for landing at Funchal in a *two oared* boat is 300$^{rs.}$ = 1*s.* 3*d.*; if in a *four oared* boat, 200$^{rs.}$ = 10*d.* extra. Strangers are, however, greatly imposed upon by the Portuguese boatmen, and, no established tariff existing, as much as 20*s.* has frequently been demanded. Visitors and others on their arrival and departure generally pay more for their boat hire than on other occasions, a custom which the Madeira boatmen now seem to look upon as a law. It is therefore advisable to leave the settlement of their charge to the landlord of the house in which you take up your quarters for the time being, who will generally see that no imposition takes place.

Having landed at Funchal, the visitor will find no difficulty in obtaining accommodation; nearly

all the boarding establishments, as well as those termed hotels, will receive passengers for a few days, or till they can decide on, or procure, a permanent residence.

The most nervous or fastidious invalid need be under no apprehension that there are any important difficulties to be encountered in proceeding to or landing at Madeira. The interests of the Island are so materially promoted by the sojourn of visitors, that the local authorities adopt every measure to encourage their presence; and, in all their custom-house and municipal regulations, render every facility both on their arrival and departure.

Passengers' luggage, except a carpet bag, or a few articles for immediate use, cannot be removed from the vessel till application has been made at the *casinha*, or customs-guard house, and, on being furnished with a list of the packages, they send an officer to convey them on shore. To facilitate this, it is advisable to deliver your principal letter of introduction as early as possible, and the parties will willingly lend their assistance, or the landlord of the boarding-house will do all that is needful in the case.

The custom-house at Madeira offers an example to all others. The greatest politeness and promptitude are shown to all visitors, the detention of luggage is brief, and the examination conducted on most liberal principles. All wearing apparel, and bed or table linen having been in use and belonging

to persons arriving, are allowed to pass free of duty. Silk or other dresses not made up, or ladies' bonnets and dresses which have not been in use or in unreasonable numbers, are charged accordingly. All plate, or plated articles, articles of furniture, saddlery, and musical instruments, &c., are freely admitted, on giving bond for their reshipment, or payment of the duties, within eighteen months.[1]

Soap, tobacco, cigars and snuff are prohibited, the supplying of these articles being leased, by the Portuguese Government, to a private company, who furnish the island with trash, and, particularly with regard to soap, at an exorbitant price. Tea is also prohibited unless imported in Portuguese vessels from Lisbon, or direct from the East Indies.

The charges at the custom-house, in clearing luggage, are trifling. $400^{rs.} = 1s.\ 8d.$ is usually allowed to the officer bringing it on shore, besides the hire of the boat, and from $50^{rs.}$ to $130^{rs.} = 2\frac{1}{2}d.$ to $5d.$ per package for porterage, &c., according to their number and size.

[1] For a list of duties chargeable in Madeira, see Appendix K.

CHAPTER XI.

BOARDING-HOUSES — FURNISHED HOUSES — SERVANTS — HORSES — PALANQUINS — HAMMOCKS — SLEDGES — BOATING — SHOPS — CLUBS — LIBRARIES — PEW-RENTS — MEDICAL PRACTITIONERS — DRUGGISTS — MEANS OF RETURNING TO ENGLAND.

THE increase of visitors to Madeira within these last few years has added considerably to the number of boarding-houses throughout Funchal. These are situated in almost every quarter of the town, and afford ample room for selection. The principal establishments are here given in alphabetical order, and in his choice the stranger can be guided by his own observations, or the recommendation of his friends or medical adviser, as regards position and other advantages:—

Cearns, Wm., 33, Rua da Carreira.
Counis, D., 22, Rua do Aljube.
Freitas, J. H., 57, Rua da Carreira.
French, Mrs., 58 and 59, Rua da Carreira.
Giulietti, Madam, European Hotel, 1, Travessa d'Alfandega.
Hayward, Mrs., 4, Rua de Saõ Pedro.
Hollway, J. H., Caminho do Meio, and 16, Rua do Aljube. (1)
Mace, Thos., 33, Caminho da Torrinha. (2)
McGinn, Miss, 2, Rua das Aranhas.
Miles, Jno., 14, Rua dos Pintos.
Pestana, Madam, Caminho de Sta. Luzia Velha. (3)
Reid, Wm., 5, Rua do Mercado.
Shaw, Mrs, 19, Rua do Castanheiro.

Wardrop, Miss, 36, Rua da Carreira.
Wilkinson, S., Rua do Estudo.
Wilkinson, Wm., Rua de Ponte Nova.
Yates, Jno., "Family Hotel," Cacs.

Besides the foregoing, there are a few private families where two or three persons can find comfortable accommodation. Those marked 1, 2, 3, are situated at the outskirts of the town, at an elevation of 298, 293, and 525 feet, respectively, above the sea.

There is a bath establishment attached to Mr. S. Wilkinson's boarding-house, Rua do Estudo. The landlord also acts as house-agent, and will furnish those who wish to hire a *quinta*, or villa, for the season, with every requisite information.

The charges at the boarding-houses vary, according to their standing, from forty to fifty dollars per month, which includes wines of the island, and every necessary comfort. The majority provide a general table only, but accommodation may be obtained entirely separate from the other inmates at an extra charge of about ten dollars per month, or according to the conveniences required. Foreign wines, spirits, and malt liquors, are not included. Servants and children are usually charged one-half, and it is customary on leaving to present a small gratuity to the domestics of the establishment.

The charge for washing is from 1,500$^{rs.}$ to 2,000$^{rs.}$ = 6*s.* 3*d.* to 8*s.* 4*d.* per month for each person, or 250$^{rs.}$ to 300$^{rs.}$ = 1*s.* ½*d.* to 1*s.* 3*d.* per

dozen pieces. In the case of a family, however, an agreement is usually made at a somewhat lower rate.

There are no lodgings to be had in Madeira similar to those in England, where the parties supply their own *cuisine;* but for those who desire furnished houses a selection may be had in almost every locality at the outskirts of the town, where they are mostly situated, with gardens and stabling attached. A list of these, with their elevation above the sea, will be found appended,[1] and every information regarding accommodation and other particulars may be obtained at the grocery establishments of Messrs. Wilkinson, or Mr. Payne.

In hiring a furnished *quinta*, or villa, for the season, the period should be distinctly specified, and a written agreement made with the landlord. One-half of the rental is usually paid on taking possession, and the other moiety at the expiration of three months. It is also advisable to examine the inventory carefully, and to specify the additions required to it, before concluding the agreement. One blanket and one counterpane are furnished to each bed, and all bed and table linen, toweling, &c., must be provided by the party themselves, as well as plate of every description.[2]

The greater number of these houses may be hired for the *whole* year for a few pounds extra,

[1] See Appendix N.

[2] Furnished houses are not let by the month, unless the season be far advanced.

and there are no taxes or public burdens of any kind attached. The landlords usually claim a right to the garden and produce, unless excluded by a special agreement.

With regard to servants, there is little or no difficulty in selecting the requisite establishment. They are generally hired by the month, the wages varying according to their qualifications:—

For a superior cook,	from 7 to 9	dollars.	Men servants.
„ good plain do. . .	5 to 7	„	
„ „ waiter . . .	6 to 9	„	
„ house or table-maid	3 to 5	„	Without food.
„ stable-boy . . .	2 to 3	„	
„ burriqueiro or groom	4 to 6	„	

The higher rate is usually expected when the servant can speak or understand a few words of English. It is by no means advisable to bring out English servants; unless they have been long accustomed to the family they accompany, they generally occasion more trouble than is repaid by their assistance. Not speaking the language, they are of little use in Madeira, and, differing in their habits from the Portuguese domestics, require a separate table and attendance. At sea they are equally useless, abandoning themselves to the prostration of sea-sickness, and appearing to suffer greatly more than their employers.

Visitors who are partial to horse-exercise should bring out their own saddles, as those to be had on the Island are generally very hard and uncomfortable. Although there are few horses to be found

in Madeira without some blemish, the style of animal has been greatly improved of late by importations from England, America, and Portugal, and, in purchasing, a considerable selection is offered at prices varying from 40 dollars for small island ponies, to 200 dollars, or even upwards, for large or superior animals. In long journeys, or in travelling along the narrow rugged roads of the north, the smaller horses, not exceeding 12 hands, are usually preferred, and for 70 or 80 dollars a decent pony of this size may be obtained. In selling again in the spring, however, the visitor must make up his mind to submit to a considerable loss. The expense of keep is about seven dollars per month, exclusive of attendance. Stabling is charged at the boarding establishments from 1½ to 2 dollars = 6*s.* 3*d.* to 8*s.* 4*d.* per month; or an agreement may, in some cases, be made for the entire keep for about 12 dollars = 50*s.* a-month. Grass, the usual food, is furnished in abundance during the winter season at 75$^{rs.}$ to 100$^{rs.}$ = 3¾*d.* to 5*d.* per bundle, sufficient for one day,[1] and is brought to the stable every morning. Maize or Indian corn is given in place of oats, which are rarely to be obtained; the usual allowance, where moderate exercise or work is given, is one-quarter of an *alqueire* per day, the *alqueire* usually costing 350$^{rs.}$ = 1*s.* 5½*d.* Many persons prefer having the

[1] Very good hay is grown on the mountains, but is not much used except during the summer, when grass is scarce. It is usually sold at 400$^{rs.}$ = 10*d.* per *arrobo* of 32 lbs.

corn bruised, in which case a *maquia*, equal to one-sixteenth part, is taken at the mill, but the bulk is considerably increased.

In hiring a horse by the month, the charge varies from 20 to 30 dollars (=4*l.* 3*s.* 4*d.* to 6*l.* 5*s.*) according to the style of animal, and 1½ to 2 dollars (=6*s.* 3*d.* to 8*s.* 4*d.*) to the *burriqueiro* or groom.[1] When hired by the hour the charge is 300 rs. = 1*s.* 3*d.* for the first, and 200 rs. = 10*d.* for each succeeding period, with a trifling "*pour boire*," at times, to the attendant. In journeys to the north, or by the day, the usual cost is from 1½ to 2 dollars (=6*s.* 3*d.* to 8*s.* 4*d.*), and 200 rs. or 10*d.* to the *burriqueiro*; these men accompany their employers on all occasions, and are always near to render any assistance that may be required. They keep up with their animals, frequently holding on by the tail, even during a pretty severe gallop, or a lengthened excursion round the island, and are usually exceedingly civil and obliging. They are by no means, however, the most honest of their kind, and as their food is in a great measure made up of milho, ground and prepared, they are nowise averse to supply themselves at the expense of the poor horse. The generality of the Madeira men-servants take after the *burriqueiros*, in helping themselves when an opportunity offers; and seldom scruple to buy the various household supplies in the cheapest market, and charge them at the

[1] If taken to the north, an agreement to that effect is necessary, and an increase of charge is made.

highest rate; and the purchase of meat, fruit, groceries, &c. being usually entrusted to the cooks, there is plenty of scope afforded for peculation. To avoid this system of robbery it is advisable to adopt the pass-book system in all purchases with which they may be charged.

There being no roads in Madeira fit for wheeled vehicles, those who are unable to ride on horseback, and ladies in visiting, usually employ the *palanquin*, a kind of settee suspended from a long pole, which, when carried, hangs about twelve inches from the ground. It is partly covered with an awning and curtains, the seat is low, and the attitude rather cramped. These vehicles are carried on the shoulders of two men, one preceding the other, who are paid $150^{rs.} = 7\frac{1}{2}d.$ each per hour, and $100^{rs.} = 5d.$ for whatever time the palanquin may be employed on hire. Many of the furnished houses, however, provide a conveyance of this description. On account of the greater weight of the *palanquin*, and the rugged nature of the country roads, *hammocks* are usually made use of by invalids for any lengthened excursion, or even about town by those who prefer this mode of locomotion. The *Madeira hammock* is generally made of strongly wove hempen threads, of various colours, with a deep netted fringe; it is suspended from a long pole, and carried as the *palanquin*, but the elevation from the ground is considerably greater, and the position much more agreeable. The charge is the same, except in long excursions, when it is

advisable to procure bearers from St. Antonio, or other parts of the country, who are paid at the rate of 600rs. to 800rs. (= 2*s.* 6*d.* to 3*s.* 4*d.*) each per day, according to the time they may be employed.

Of late years several families have had machines built, somewhat similar to a Russian sledge. These are drawn by a yoke of oxen, and carry from four to six persons. They are not adapted, however, for the roads out of town; but for short rides, though their progress is rather slow, they are exceedingly comfortable and economical. The charge for a pair of oxen, and a driver who walks behind, varies according to the distance, but they may be engaged for about a dollar per day. In the course of a few seasons it is probable these sledges will become a common mode of public conveyance among the English residents and visitors; at present they are only to be had on hire from the manufacturer *Mestre Philippe*, at 10, Rua Direita. Besides the foregoing, chairs made of light wicker-work, and suspended nearly in the same way as a *sedan-chair*, are sometimes made use of.

Boating is frequently resorted to by invalids, and others, as an amusement, and is strongly recommended by medical men in chest complaints. Many pleasant excursions may be made along the coast, and the boats are clean, comfortable, and well managed. The charge with two men is 300rs. = 1*s.* 3*d.* per hour, or 1,200rs. = 5*s.* per day, with four rowers 500rs. = 2*s.* 1*d.* per hour, or 2

dollars = 8*s.* 4*d.* per day. If the distance is great, however, such as to the fossil bed, or Machico, an allowance of 400$^{rs.}$ = 1*s.* 8*d.* is usually made. The boatmen will provide fishing lines for those whose inclinations lead that way, but the depth of water renders this rather an arduous pastime for most invalids. Lines of from 30 to 60 fathoms are usually employed, and the fatigue of drawing up such a length of cord, after probably a mere *nibble* at the bait, is far from being compensated by the number or size of the fish obtained, although, from their great variety and beauty of colour, this pastime is likely to afford considerable amusement to lovers of ichthyology. The fish market is also worthy of a visit early in the morning to all those interested in such a subject, and even others will sometimes find many singular and interesting specimens of the finny tribe.

Many persons leave England with the idea that there are few of the necessaries, and none of the luxuries, of life, to be obtained at Madeira, and load themselves, unnecessarily, with all sorts of groceries, &c., and provide a supply of clothing as if they were about to undertake a voyage round the world. No opinion can be more fallacious, for almost every article, whether as regards food or clothing, can be obtained at Funchal, at prices little exceeding, and in many cases less than they cost in England. A list of many articles, with their usual prices, will be found appended.[1]

[1] See Appendix O.

There are two English grocery and baking establishments, where all sorts of groceries, pickles, &c. are received direct from London, and plain or fancy bread can be had quite equal to that at home. These are:—

W. and A. Wilkinson's, No. 2, Rua do Aljube, facing the Cathedral Square, and
J. Payne's, No. 1, Rua dos Inglezes, near the custom-house, with a store attached, for the sale of crockery, glass, &c.

There are also several Portuguese stores or shops, where many articles of a similar nature can be obtained.

The English drapery stores, where every description of clothing, &c. can be obtained, are:—

The "British Warehouse," No. 1, Travessa d'Alfandega; and
The "Glasgow and Manchester Warehouse," F. Wilkinson and Co., 14, Travessa d'Alfandega.

There are also several Portuguese shops, among which may be mentioned:—

Bastos and Co., No. 14, Rua dos Mercadores.
F. Luiz Perreira, No 19, Rua dos Mercadores.
F. Gomes e Filho, No. 3, Rua de Bettancourt; and
Victurino F. Nogueira, No 20, Largo de Saõ Sebastiaõ.

At the stationery and perfumery store of F. Wilkinson and Co., Travessa d'Alfandega, a variety of these and other articles are to be obtained. Messrs. Wilkinson and Co. also receive orders for books, periodicals, &c., of which they obtain a supply by the Brazil mail steamers, every month, and charge

the regular publisher's price, including all expenses. There are also good hatters, tailors, boot and shoe makers, and other artisans.

Ironmongery and hardware are to be had at "Bastos and Co.'s" No. 3, Rua dos Mercadores, and a few other places.

At G. Boldering's Birmingham and Sheffield Warehouse, nearly opposite the British Consulate, saddlery, plated goods, optical instruments, and a variety of articles too numerous to mention, are to be obtained; piano-fortes are also to be had on hire at this establishment, the usual charge being from 48 to 50 dollars (10*l.* to 10*l.* 8*s.* 4*d.*) for the season, or by the year for 10 to 20 dollars extra. They may likewise be hired at Messrs. Payne's or Wilkinson's, and of Mr. De Freitas, 57, Rua da Carreira.

Most of the shops in Funchal are to be found in the streets adjoining the Custom-house; their outward appearance is by no means prepossessing, being generally in confined situations, and without any show, or even a window to set off their goods.

Small huckster and wine stores are thickly scattered over the town, and along the country-roads. The latter are generally known by a small board hung from the doorway, and bearing the letters P.V.B., for *Paõ e Vinho Bom*, or good bread and wine.

Those who are fond of literature, or light reading, will find sufficient to interest and amuse them

in the various libraries and reading-rooms of Funchal.

At the "English Club," near the Cathedral, there is a select library of nearly two thousand volumes, with a billiard-table attached. At these rooms the *Times*, *Morning Chronicle*, *Illustrated London News*, *Athenæum*, *India Mail*, *Punch*, and several other English, French, and Portuguese newspapers and periodicals, are regularly received. The admittance is by ballot, the visitor being first introduced by a proprietor. The subscription is 3 dollars (= 12*s.* 6*d.*) per month, 8 dollars (= 1*l.* 13*s.* 4*d.*) per quarter, 15 dollars (= 3*l.* 2*s.* 6*d.*) per half year, or 24 dollars (= 5*l.*) per annum.

At the "Portuguese Club," No. 2, Rua de Perù, the principal Portuguese, French, and a few English newspapers, are taken in. There is no library, but a good billiard-table: tea is furnished every evening, and a ball once a month during the season; the subscription is 3,600rs.(=15*s.*) per month, for visitors, who are admitted by ballot, as in the English rooms.

The "Commercial Rooms," near the *Çaes*, or pier, receive the *Times*, *Mercantile Advertiser*, *Shipping Gazette*, *Illustrated London News*, *Punch*, *Journal de l'Europe*, besides a variety of Portuguese and American newspapers. The arrival and departure of vessels and passengers are regularly noted at these rooms, in books kept for that purpose; there is likewise a pleasant veranda attached, affording an agreeable lounge, and a fine view of

the bay. The subscription is only 2 dollars (= 8*s.* 4*d.*) for the season of six months.

There is also a library attached to the *Camara*, or Municipality, containing upwards of 1,800 volumes, among which there are several English and French publications, and many old and valuable works and MSS. from the suppressed monastery of Saõ Francisco. This library is open to the public *gratis*, from 9 till 3. The secretary, Senhor Antonio Pio Fernandes, is most obliging, and will allow books to be removed for a few days by any respectable applicant. This library does not appear to be much known, even among the Portuguese. The annual outlay for books is so trifling, and the little use made of those it contains so manifest, that nothing else is wanting to show the great apathy of the majority of the natives with regard to literary pursuits.

There are also libraries in connexion with the Episcopal and Presbyterian Churches, the annual subscription to each being only one dollar, or 4*s.* 2*d.*

Church service is performed regularly by the British Chaplain, the Rev. T. K. Brown, at the elegant and beautifully situated English Chapel, No. 10, Rua da Bella-vista. The library attached to this chapel was established by the present chaplain, on his arrival in 1848, and already consists of upwards of 550 volumes. During the ministration of the former chaplain, the Rev. R. T. Lowe, it was considerably more extensive, but on his re-

moval by Her Majesty's Government, at the urgent solicitation of the majority of the congregation, the library, subscribed for by them, as if *his* private property, was removed; many truly evangelical works having previously been thrown aside for the Oxford Tracts, or similar publications. The Communion plate was likewise removed, on the plea that it had been purchased by *his* communicants, and therefore belonged to *him*, or to *his* Church. The great majority of the residents, however, were so pleased to obtain the removal of their ill-suited pastor, and were so unwilling to bring their differences before the Portuguese courts of law, that they took no steps to recover the property belonging to their Church.[1]

There is also a chapel at No. 1, Travessa do Surdo, conducted by the Rev. James D. Burns, where service is regularly performed in connexion with the Free Church of Scotland. The library attached to this chapel contains upwards of a thousand volumes.[2]

The seats in the English church are charged six dollars (=1*l.* 5*s.*) each, per annum, or one dollar (=4*s.* 2*d.*) per month; but in the case of a family occupying several sittings, these charges are somewhat reduced.

At the Scotch church the seats are 5 dollars

[1] See Appendix B.

[2] The stipend of the clergyman of the Presbyterian church is paid partly by the congregation, and partly from the Free Church Sustentation Fund.

(=1*l.* 0*s.* 10*d.*) for the season or year, and 1 dollar (=4*s.* 2*d.*) for servants.

The Rev. R. T. Lowe, since his removal from the chaplaincy, has established a church of his own at No. 14, Rua das Aranhas, with a view of carrying out his so-called *Tractarian* principles. The library attached contains about 200 volumes.[1]

The want of gaiety and amusements in Funchal is sometimes complained of by invalids; the usual routine of life, they say, is too monotonous to render it an eligible resort; little imagining that the very evils they complain of so materially assist in their restoration to health. With regard to theatres, and such places of night resort, Madeira is certainly far behind the Italian and Continental States, neither can it boast of museums or picture-galleries. A few balls during the winter season, with a chance concert or two, constitute the fashionable amusements of the place; but even these are better avoided by all invalids, whose restoration to health ought to be their chief aim during their sojourn here, having probably made many sacrifices, and left the comfort of friends and home for that end.

One of the sources of amusement most frequent among the visitors are the *Pic-nic* parties during fine weather, either by sea or land; but even in these little discretion is shown, and a *Pic-nic* is usually thought nothing of unless a ride of five or

[1] The Rev. R. T. Lowe is paid by voluntary contribution, and the seats in his chapel are nominally *gratis*.

six hours be obtained, or some of the loftiest hills ascended! and for invalids generally, nothing can be more injurious than these long, and probably galloping excursions, or the chilling blasts encountered at times, on these exposed heights. A quiet ride to a moderate distance, and as near the sea as possible, is better, and quite as interesting as a hurried visit to greater elevations.

In January or February it is usual for one or other of the regular trading packets to make a voyage with passengers to Teneriffe and Grand Canary, where they remain a sufficient time to afford an opportunity of visiting all the interesting localities of these islands—generally a week or ten days at each—and return direct to Madeira, thus affording an agreeable change from the monotonous life in Funchal. The usual charge for these pleasure excursions is ten guineas each. The accommodation obtained at these localities is, however, of a very inferior description, and many persons prefer living on board the vessel during their sojourn, in which case one dollar (=4*s*. 2*d*.) per day is charged.

Many unfit and sad cases are annually sent out to Madeira, probably to end their days, away from all the endearing comforts of friends, without an idea of their complaint, or any rules to regulate their conduct—without any instructions from their medical advisers at home for their guidance during the voyage, or on their arrival. They appear as if sent merely for a change of climate, as though that

change were to renew their shattered constitutions, and render further care unnecessary. Such ignorance or carelessness is to be deplored; and the invalid resorting to Madeira, or any southern climate, should consider that he is merely placing himself in a more favourable position for his recovery, and strictly observe all those rules which have been laid down for his guidance at home. He should be furnished by his medical adviser with specific instructions for the precautions necessary during the voyage, and earnestly counselled to place himself on arrival under the guidance of some experienced physician, so as to be in a position which may enable him to derive the greatest advantage from the influence of climate. The resident English medical practitioners, arranged in alphabetical order, are—

Dr. Broughton, Santa Luzia.
Dr. Lund, Santa Clara.
Dr. Miller, Torriaõ.
Dr. Ross, Rua das Hortas.
Dr. Tibbetts, Rua da Mouraria.

The usual fee is one *guinea* for the first visit, and half-a-guinea for each succeeding visit. Where the visits or examinations, however, are periodical, or at lengthened intervals, a physician's fee is usually paid. Some years ago it was necessary to land at Madeira well provided with medicines, except those of the commonest kinds. That necessity has long ceased to exist, and visitors will find medicines as well dispensed as at any of the first-

rate London chemists, and the charges exceedingly moderate. The principal chemists' shops are—

The *Botica dos dois Amigos*, Senhor—Machado, No. 4, Rua da Igrejinha, and
Senhor Gerardo José de Nobriga, Rua da Princeza.

Invalids returning direct to England generally leave the Island towards the end of May or the beginning of June. At that period there are frequent opportunities offering, as the regular packets study their own interest as well as the convenience of passengers with regard to their time of sailing, and these vessels are decidedly the most comfortable conveyances either out or home. They proceed direct to Southampton or Portsmouth at the option of the passengers, and charge the same fare as on their outward voyage, but the passage is usually two or three days longer on account of the northerly winds and calms which prevail at this season.

At an earlier period one or two of these packets usually make a voyage to Cadiz, for the convenience of those who wish to visit Spain, or to proceed through France. The passage money for the voyage is 10*l.*, servants and children one-half. There are other opportunities offering from time to time by vessels proceeding to the Mediterranean, and landing passengers at Gibraltar.

The *Galgo*, Madeira and Lisbon packet, sails nearly every month direct for Lisbon; the passage-money by this vessel is 25 dollars (= 5*l.* 4*s.* 2*d.*) Strangers in visiting the Portuguese capital are frequently

subjected to considerable annoyance and trouble at the custom-house, as well as from the passport regulations. Should they desire to proceed onwards by an early conveyance, they ought to obtain the assistance of some party acquainted with the routine of these matters. An application to the agents of the vessel will probably tend to facilitate their arrangements in this respect.

The Brazil line of steamers call at Madeira also on their return voyage to England, and are due at Funchal on the 3d of each month. The homeward charges are the same as those which have already been given in a former part of the present work.[1]

On leaving the Island it is necessary to obtain a passport, whether proceeding direct to England or by any other route. This document—a guarantee that there is no claim existing against the party—is usually obtained through the Consul, the charge being 3.240$^{rs.}$, (=13*s.* 6*d.*), and must be shown to the health-officer on his coming on board to clear the vessel. If they are proceeding to Spain the *visé* of the Spanish Consul is required, and the same for any other foreign country, for which a charge of one dollar (4*s.* 2*d.*) is exacted.

A gratuity of 50$^{rs.}$ (= 2½*d.*) per package is usually paid to the officer stationed on the beach on embarking the luggage, and prevents the trouble and annoyance of obtaining a permit for that purpose, or risking their exercise of the right of search.

[1] See page 104.

CHAPTER XII.

MEDICAL DIRECTIONS FOR INVALIDS DURING THE VOYAGE.

IMPRESSED with the idea that some instructions or advice, in a medical point of view, for the guidance of invalids resorting to Madeira, might be found useful, the Author, on making application to Dr. Lund—a physician who had resided, and practised, on the island for several years—for some information on these points, has been kindly furnished, by him, with the following notes, which appear so correct and useful in every part, that the writer has obtained Dr. Lund's sanction for their publication entire.

"Invalids resorting to the Island of Madeira for the recovery of their health are chiefly those suffering from pulmonary diseases, of whom there are two classes; the first, where the complaint is in its early stage, during which period the climate generally acts beneficially in arresting its further progress, and there is no doubt that more would experience relief but for their own imprudent conduct; the second class is composed of those in the last stage, where no reasonable hope of recovery can be given; still, even here, its downward pro-

gress is often much retarded, and life's frail tenure prolonged; all the symptoms become milder than at home, and the remaining term of existence is passed with comparative comfort. There are persons who have now been living many years on the island, whose cases, on leaving home, were pronounced hopeless; some, I know, have long had large portions of the lungs destroyed; these are the fortunate exceptions to the almost universal fatality of confirmed consumption, and shew that, even under the most adverse circumstances, hope is not to be entirely given up. These persons ride and boat, enjoy the society of their friends, make voyages home in summer, and live, with prudence, a comparatively happy life.

"It is to be regretted that invalids who might derive benefit from the climate of Madeira in an early stage of their disease, too often lose invaluable time by frittering it away at some of the English resorts, not one of which is really suitable to their case. They dread the voyage; and the advice to take cod-liver oil and remain in England, which it has lately been the fashion with some medical practitioners to give, is no doubt a great inducement to delay their departure. That such advice is not the best is evident from the fact that the opportunity of constantly respiring pure air, and taking regular exercise, cannot be enjoyed, during the winter and spring, by invalids in England—where they must necessarily live shut up in rooms, and only enjoy the open air for a

few hours during that rare occurrence, fine weather, and even then are obliged to wear a respirator, or be closely muffled up. With these disadvantages the use of cod-liver oil must prove less beneficial than it would do under more favourable circumstances. It is freely used in Madeira, though in moderate doses, and undoubtedly improves the functions of assimilation and conversion, enabling the blood to deposit healthy lymph, instead of albumen which constitutes tubercle; but for the removal of the unhealthy structure already deposited, one of the chief means is exercise and the free inhalation of pure air. Again, where one portion of any organ is prevented by disease from doing its duty, it becomes doubly imperative that the remaining portion of healthy structure, which has double work to perform, should be placed under as favourable circumstances as possible for the more efficient discharge of its increased functions: hence the necessity of a constant supply of pure air, when only a limited part of the lung is acting, and the importance of selecting large and well ventilated sleeping apartments. These circumstances show that if a change is to be made, it should be to some decidedly good climate possessing advantages sufficient to repay the invalid for the sacrifice he undergoes in leaving the comforts of home. In my own case, I acted, many years ago, according to this advice and with the most beneficial results. The late Dr. Andrew Combe, in writing to a friend, says, "*If I must go abroad*, I

shall most likely return to Madeira, on the simple ground that, if I must forego the pleasures of home, it is better to resort at once to the *most* advantageous climate than to adopt the half measures of going to Italy, Jersey, or the south of England."[1]

"For a trustworthy account of the climate of Madeira, as reported by two physicians long resident on the island, Sir J. Clark's book on climate can be referred to, and after a residence of nine years I can confirm the very great accuracy of their remarks. Having also made inquiries, for some years past, from invalids who have wintered at different favourite localities, such as Pau, Pisa, Nice, Rome, Malta, Malaga &c., how the climate of Madeira ranked in comparison with those they had tried, the answers have universally been in favour of Madeira. That of Egypt is the only one approximating to it; but in that country many drawbacks exist.

"Some complain of the dulness of Madeira, and the want of gaiety, or places of public amusement, but, medically considered, these are far from advantageous; indeed the late Dr. Renton remarked that, if the winter in Madeira proved a little worse than usual, his patients generally progressed more favourably, for the simple reason that they then acted with greater prudence.

"In addition to those suffering from chest complaints, there are other classes of invalids who

[1] Life and Correspondence of Andrew Combe, M.D. Longman & Co. London, 1850.

are much benefited by a sojourn in Madeira; such as those labouring under morbid conditions of the blood, and the diseases arising from this state, rheumatism, scrofula, kidney affections, and various chronic diseases, imperfect recoveries after fevers, and those who cannot resist cold, and consequently suffer from internal congestions and imperfect action of the skin. Persons suffering from affections of the brain and nervous system, or a tendency to apoplexy, asthma, chronic diarrhœa, and dysentery, should not be sent to Madeira."

Notwithstanding every information has already been afforded in the body of this work, as regards the different modes of reaching the island, "I am," Dr. Lund writes, "so fully convinced of the great superiority of the regular Madeira sailing packets, in affording the greatest comfort, and attention to invalids, that I cannot forbear recommending them to avail themselves of these conveyances; and this advice I give from my own experience of the inconvenience and lack of comfort on board the old line of steamers, as well as sailing vessels, merely touching at the island. The regular packets are all first-class vessels, fitted up chiefly for the accommodation of delicate persons, are amply provided with all invalid requirements,[1] and have a sufficient number of stewards to ensure good attendance. The residents, in their journeys

[1] These packets carry a regular medicine chest, so that, unless a particular remedy be required, the invalid need not encumber himself with drugs.

to and from England, almost invariably give the preference to these vessels. The new line of steamers, touching here on their way to the Brazils, may be more comfortable than any hitherto on the station, but this has yet to be proved. They certainly perform the voyage with greater speed and regularity than sailing vessels, but a quick passage from England to Madeira, especially in September or early in October, is positively detrimental to a delicate person. The transition from cold to heat is very trying, and apt of itself to occasion illness; a passage of from 12 to 14 days is decidedly preferable; the change is then gradual, and the constitution becomes accustomed to the greater warmth which prevails in Funchal till after the first autumnal rains.

"A mild aperient taken previous to embarking will be of advantage in mitigating the excessive nausea of sea-sickness; and a good form is three grains of blue pill and five of compound aloetic pill, made into two pills, and taken at bed-time. When sea-sickness comes on the best plan is to lie down, and let the stomach be completely evacuated, drinking occasionally small quantities of fluid. Murray's fluid magnesia not only corrects acidity but renders the vomiting easier: after the violence of the vomiting has subsided, small quantities of stimulating food and drink can be taken; fresh air on deck is also necessary. Preventives for sea-sickness, such as creosote, &c., allay the vomiting for a time, but leave intolerable nausea.

"Much after mischief would be avoided if invalids would live moderately during the voyage, and prevent constipation by occasionally taking a mild aperient, as the compound rhubarb pill; if stronger medicine be required, an aloetic or colocynth pill may be taken, but in all chest diseases, and more especially in the advanced stage, purgative medicines must be used with the greatest caution.

"In cases of hæmoptysis, or spitting of blood, where there is no medical assistance to be obtained, the following general directions may prove of service. If the attack is slight, living very abstemiously, keeping quiet, and observing perfect silence, with a saline purgative, may be sufficient; should the attack be more violent, it will be advisable to dissolve one table-spoonful of salt in a small quantity of cold water, and drink it off directly; this dose can be repeated in half-an-hour if necessary. Should the bleeding still continue after the use of the salt, and after free purgation with Epsom salts, astringents must be used, as the infusion of Matico, made by pouring one pint of boiling water over one ounce of the leaves, and straining it when cold; a wine-glassful of this can be taken every three hours. Lead is also a valuable astringent, but cannot be used in unprofessional hands with safety. Ten to fifteen drops of diluted sulphuric acid in half a wine-glass of water, taken two or three times during the day, is also useful.

"Upon landing in Madeira, the invalid must carefully avoid all causes of excitement in moving

to his place of residence. For the first few days it is requisite to live very prudently, avoid too much indulgence in fruit, and drink very little, if any, beer or wine; indeed, strict moderation must be the rule not only now but during his whole sojourn. Carefully avoiding any exercise, which materially quickens the pulse and breathing, will save future attacks of illness; and walking, exposed to the mid-day sun, or up the hills, is especially to be avoided. During damp or wet weather, and particularly after sun-set, the invalid should keep within doors. The general rules for restoration to health are comprised under the heads of air, exercise, regulated diet, attention to the skin, and keeping up any deficient function; the special application of these must be varied to suit each individual case, but all will be benefited by strict temperance, regular and early hours, and avoiding all excitement.

"A work, entitled *Physiology applied to Health and Education*, by Dr. A. Combe, is an excellent guide in matters relating to health; it should be read, and its directions followed, by all invalids, who will then understand the reasons of many directions which are given by their medical man, and will thus follow out his instructions not only with profit to themselves, but will find their performance much less irksome than when done in ignorance."

CHAPTER XIII.

TOUR OF THE ISLAND, &c.

THE singularly broken and rugged nature of the surface of Madeira, and the consequent difficulty of constructing good roads, tends greatly to impede the intercourse between the inhabitants of the different parts of the Island; and in many secluded situations, especially along the western coast, the appearance of a stranger causes as much wonder and speculation as might be expected to result from the arrival of a caravan of wild animals. Many of the natives never leave the ravine or district in which they were born, and the first visit to Funchal is so bewildering to those whose good fortune enables them to undertake such a journey, that it forms an epoch in their lives never to be forgotten! Little or no attention has been paid to the construction of the mountain paths, or to lessen their fatiguing ascent. The most direct route has been usually marked out, and an inclination of from 18° to 25° is by no means uncommon. Even the Caminho do Meio, a road of modern construction, and carefully paved, leading from Funchal to the north, has a continued inclination of about 23°, and is usually and appropriately, on account of its steepness, called the *Caminho do foguete*, or rocket-

road. Since the arrival of the present Governor, however, in 1846, many decided improvements have been effected in the engineering department of the public roads, and the new route to Cama de Lobos has been opened through his activity. A handsome bridge over the Ribeiro Secco, and several smaller ones, are included in this work, to which her Majesty, the late Queen Dowager, contributed largely during her sojourn here in 1848, as well as the Portuguese and British merchants and visitors: the soft nature of the soil, however, renders it often impassable during the winter months. To overcome this, and remove the extensive beds of rock which interrupt the path in many places, a considerable amount of money and labour is still required, and the subscriptions towards its completion being now limited, many years must elapse before it can be properly finished throughout.[1]

After leaving the amphitheatre of Funchal, but more particularly in the north and western parts of the island, the roads are very indifferent, resembling often the bed of a torrent, which many really are

[1] It appears somewhat astonishing that any writer on Madeira should, even with regard to these simple matters, make such gross misrepresentations as appear in a somewhat extensive work by J. Driver, published only last year, in which he thus describes this road: "A new carriage road, the only one on the island, leading from Funchal to this village, (Cama de Lobos,) and nearly level, has just been completed. This road passes through a most lovely and highly-cultivated district, near the coast, and affords such a drive for the invalid as cannot be rivalled in any

during the winter season. They are generally unpaved, or paved with large stones roughly laid down, and rendering the passage on horseback both difficult and dangerous.

The most frequented and admired rides in the neighbourhood of the town are those of Sant' Antonio, Sant' Amaro, the Estreito, and Cama de Lobos, on the west; the Palheiro and Santa Cruz roads, on the east; Saõ Rôque, the Mount, and Curral dos Romeiros, or Little Curral, on the hills towârds the north. The first of these is probably the least interesting, being enclosed between walls which completely shut out the view till an elevation of about a thousand feet is obtained.

Palheiro.—The Palheiro,[1] belonging to the heirs of the late Conde de Carvalhal, is situated to the east of Funchal, at an elevation of 1,800 feet above the sea. The ascent occupies about an hour,[2] but the road is good. The grounds are somewhat in the style of an English park; the garden, however, is small, but contains many curious plants, among which are several kinds of Cacti, and some enor-

part of the world. The road is macadamized, is of great width, and has a parapet on each side." He adds, "A drive of seven miles out, and characterized by the most imposing scenery, may now be enjoyed !!" These remarks must surely have been written for the benefit of some future generation, so diametrically opposed as they are to the facts observed by every visitor.—See Driver's Work on Madeira, pp. 319 and 385, published by J. Churchill, London, 1850.

[1] *Palheiro do Ferreiro*, Blacksmith's Hut.

[2] A Table, showing the time occupied in various excursions about the island, will be found in Appendix P.

mous trees of the Camellia Japonica, bearing flowers of great beauty and variety of colour. The house is small, and almost hid from view by the lofty trees which surround it. The former owner of these grounds was one of the wealthiest subjects of Portugal, possessing large estates in different parts of the island, and giving occupation to an immense number of dependents. The estates are now managed by Mr. G. D. Welsh, from whom an order for admission into the Palheiro grounds is necessary.

Little Curral.—From a turning to the west of the Palheiro gate, a road branches off along the side of the hills, towards the Caminho do Meio, from which some beautiful glimpses of scenery can be obtained. On emerging into the paved road, the rider can descend to Funchal, passing the boarding establishment of Mr. Hollway. Or he may avoid the annoying steepness of this road by following the first turning leading to the right, and passing through the magnificent scenery of the "Little Curral," towards the Mount Church, where the grounds of the late J. D. Webster Gordon, Esq. are also well worthy of a visit. From this point the descent to town is more gradual.

New Road.—The new road is carried as far as the Ribeiro dos Socorridos, along the sea-cliffs, and in dry weather affords a very pleasant ride, interspersed with several picturesque views, including the bold headland of Cape Giram, probably the highest sea-cliff in the world. Along

this road, between the villa of the *Gurgulho*, formerly the Lazaretto, and *Prayà-formosa*, (a lovely little bay to the westward,) and at a distance of about fifty yards from the verge of the cliff, there is a curious elliptical funnel-shaped depression, resembling the opening of a crater, about 100 feet in diameter, and 40 feet deep, with an opening in the centre, through which the sea is heard lashing against the rocks below, although no visible aperture for its entrance can be found.

Saõ Roque.—The road to Saõ Roque passes the convent of Santa Clara, and near the Peak-fort; turning afterwards to the right, beyond the *Achada*, and ascending the hill, an acute angle in the road leads past the cemetery and church of Saõ Roque, whence, descending to the valley below, and crossing the river, it joins that of Sant' Antonio, near the church.

Waterfall.—In proceeding to the Waterfall, one of the wonders of Madeira, a path descends the side of the ravine, to the east of, and a short distance below the church of San Roque. On reaching the bottom the road is no longer practicable for horses, and the rest of the journey along the bed of the torrent, must be made on foot, or in a hammock, over large boulders and masses of rock, which have fallen from the abrupt cliffs on each side, or been washed down by the force of the winter torrents. The journey is exceedingly fatiguing, and the view is closed in on all sides by the lofty cliffs, which tower above the bed of the

ravine. After a scramble of upwards of two hours the waterfall is reached. The effect, as it opens suddenly to view, is grand, especially if the waters have been increased by late rains. The stream, however, is generally small, and exhibits the prismatic colours of the rainbow, as it descends in spray from the opening gorge, nearly 300 feet above, with a break after the first hundred feet, and an uninterrupted fall of about 200 feet. As a cascade, however, this object is scarcely worthy of the fatigue incurred in visiting it, although ranking high in Madeira, where the great and serious want of inland water detracts much from the rich and wild character of the whole island scenery. Besides these short excursions, there are many other detours in the vicinity of Funchal, which can more easily be ascertained on the spot.

The few conveniences to be found out of Funchal, for the accommodation or comfort of visitors, render a tour of the island, or even a journey to the north, a matter of grave importance. When several persons join in an excursion to any distant part, it is advisable to hire mules, in place of men, for the conveyance of baggage, &c.[1]; and it is

[1] The usual charge for a mule is one dollar, and two bits to the attendant, per day, equal to 5*s*. The writer has found Louis Gonsalves a most obliging and intelligent guide and muleteer. At the grocery establishments of Messrs. Wilkinson, or Payne, the tourist will be assisted in procuring his services. The usual charge at the hotels in the country is two dollars per day, or one dollar when the party furnish their own eatables, &c. These establishments are to be found at Santa Cruz, Sant' Anna, Saõ Vicente, and Calheta.

always necessary to secure apartments, or to advise the landlord of the hotel, where such establishments exist, a day or two before setting off: it should also be borne in mind that a stock of provisions is an indispensable adjunct to all parties travelling in Madeira. The most suitable season for these lengthened excursions, where the tourist leaves the island during the summer, is April or May; but in this respect he must be guided by circumstances.

Santo Antonio da Serra.—Leaving Funchal by the east, and passing the Palheiro, the road continues ascending and descending along the side of the hills, over a rugged and uninteresting country, to the village of Camacha, around which several of the English residents have established their beautiful summer residences: all of these are worthy of a visit. Passing the church, the road and scenery continue much the same, till the plain of S. Antonio da Serra is arrived at; here the country is quite uncultivated, but affords a meagre pasturage for cattle. The adjoining hills are covered with broom, heath, and bilberry, growing in great luxuriance. The wild and bleak appearance is in some measure relieved by the quintas and cottages of the merchants of Funchal, many of whom, as at Camacha, adjourn to this colder region during the summer months. In the district itself there is little to attract notice. The roads are good, and the visitor can find shelter in an unfurnished building, adjoining the church, which was erected many years ago as a pilgrim's house,

by subscription among the residents. The keys are in the possession of the vicar, and are given up to any respectable applicant. The road continues on to Santa Cruz, with a branch leading off towards the village of Machico, a short way beyond the church, and affords some magnificent views of the rich valley below. Passing this opening, and ascending a hill on the right, through a perfect forest of brushwood, immediately before the descent to Santa Cruz commences, the visitor, if curious in such matters, will find on the summit a singular funnel-shaped depression, called the *lagoa*, or lake, about 120 feet deep, and fully 200 feet in diameter, but without water, and having the appearance of an extinct crater. The sides are thickly clothed with brushwood, and the plain at the bottom is composed of alluvial soil, covered with grass. There are neither lavas, pumice, nor any remains of volcanic action, to be found in the neighbourhood; but it is said that the base was formerly covered with these, which, however, have been buried under the soil washed down during the unprecedented rains which occurred in October, 1803. From the brow of the hill lying to the eastward of this cone, a splendid view of the valley of Machico is obtained. The roads to Santa Cruz and Machico are pretty good, but the descent is rapid. Before reaching the church of S. Antonio da Serra, a road branches off to the left, by the side of a mill, leading to the Lamaceiros, and from thence to Porto Cruz, on the north coast.

Santa Cruz.—Taking an easterly direction from Funchal, by the road which passes along the sea-cliffs, and crossing the ravine of Saõ Gonsalves, at the outlet of which the lazaretto is now established, an irregular and steep path leads towards the *Garajáo*, or Brazen-head, which forms the eastern promontory of the Bay of Funchal. On reaching this headland the road becomes more level, and, passing the village of Caniço, continues pretty good as far as the ravine of Porto-novo, but from this point to Santa Cruz it is rough and rugged, and the surrounding country bare and uninteresting. The village of Santa Cruz is beautifully situated in a small open bay, with abrupt hills rising behind. Like most of the village ports, it has no appearance of trade or activity, and, except in its pleasing site, it is comparatively destitute of attraction. The church was erected, according to Dr. Vasconcellos' MS., in 1515, by order of Dom Emanuel, and through the activity of Joaõ de Freitas, a fidalgo of his household. A fine grove of til and laurel-trees rises in front of the sacred edifice; and the adjoining town-hall bears the date of 1513. In the grounds of Wm. Grant, Esq. a short way to the north of the church, there is a magnificent date-tree, the largest fruit-bearing palm on the island, which, when loaded with its enormous bunches of dates, often weighing forty pounds each, is an object of singular curiosity. The hotel of Santa Cruz is situated on an eminence, a little to the east of the village, and affords all

Coast View, from Heights above the Fossil-bed.

the comforts that can be expected in such a locality. The landlord, Sñr. Joaõ Fr. Gonsalves, speaks English, and is exceedingly attentive to visitors.

Machico.—Continuing the road from Santa Cruz along the coast, the ancient Franciscan monastery is passed on the left, partly built by Urbano Lomelino in 1515, but now deserted and almost in ruins. Near this monastery a pathway leads up the hills to S. Antonio da Serra. The road from Santa Cruz to Machico is comparatively good, but the surrounding country is barren and uninteresting. The huge basaltic rocks along the coast present a rough and irregular outline, covered with reddish-coloured tufa, resembling burnt earth, from which the point forming the western boundary of the narrow bay of Machico, takes the name of Ponte Queimada, or Burnt-point. From this elevation the view of the valley of Machico and the village immediately below is exceedingly picturesque. The descent, about 300 feet, is very abrupt; the road winds along the face of an almost perpendicular cliff, and is paved with large stones whose slippery surface adds considerably to the seeming danger of the path. The position of Machico is the most romantic along the coast. The richly cultivated valley recedes from the beautiful little bay for nearly four miles, and is enclosed on each side by lofty and abrupt hills, gradually rising from the bold headlands, till they close behind at an elevation of upwards of 2,000 feet. This

village has even fewer attractions than Santa Cruz. The inhabitants have a most melancholy and miserable appearance of poverty, and the visitor is surrounded and regularly besieged with bands of dirty urchins seeking charity. The little chapel, erected on the site of that said to have been built by the companions of Machin, contains a small cross of cedar-wood, which is shown to visitors as part of that which he raised over the remains of his unfortunate bride, but with very questionable authenticity. Boats may be obtained at Machico to convey parties to Point Saõ Lourenço, or

Caniçal.—The best landing-place for those visiting this so-called fossil-bed, is on the rocks beyond the chapel of *N. S. da Piedade*, our Lady of Mercy, situated on the summit of a hill about 350 feet above the sea. The great object of attraction here lies on the north side of the promontory, about half a mile from the chapel, at an elevation of 254 feet above the sea, where the ground is covered with a deep bed of loose agglutinated sand, which envelopes what appear very like the stoloniferous roots and stems of bushes and underwood in a petrified state.

Portella.—In ascending from Machico towards S. Antonio da Serra the road is very good. It branches off to the left from the elevated point from which the valley of the Portella is first seen, and joins the high road near the church of S. Antonio da Serra. Following the more direct path,

Rocks and Cliffs near the Fossil-bed

up the valley, the *Portella*, "Little Gateway," is reached. From this pass a magnificent view is obtained of the rich valley of Porto da Cruz, on the north coast. The heights of Sant' Anna, and the lofty peak of Sant' Antonio, close in the view on either side, while in front the isolated rock of Penha d'Aguia[1] rises abruptly from the plain to an elevation of 1,915 feet above the sea, and the distant islands of Porto Santo appear in bold relief on the horizon. The little village of Porto da Cruz lies at the base of the stupendous mass of rock in front, and, towards the west, the village church of Fayal stands conspicuously on the cliffs overhanging the sea. The descent from this point to Porto da Cruz is so rugged and difficult that the route by the Lamaceiros is generally preferred.

Lamaceiros.—From this pass a similar view to that from the Portella is obtained. To reach it from S. Antonio da Serra the tourist leaves the high road, by the mill, to the west of the church, and continues along the side of the hills over a comparatively level and pleasant riding path, till he reaches the road which winds along the south side of the hills from the Portella, through extensive tracts of overgrown bilberry and gorse, rendering it in some places almost impassable on horseback. At this junction the path ascends in a northerly direction, and on reaching the pass of the Lamaceiros continues on towards Porto da Cruz.

[1] *Penha d'Aguia*—Eagle-rock.

Porto da Cruz.—The descent to Porto da Cruz from the ridge of the Lamacceiros, though abrupt and fatiguing, is greatly preferable to that by the Portella. In the village itself there is nothing deserving of notice, nor is the scenery along the miserable roads, towards Fayal, at all interesting, particularly after having witnessed the more stupendous views from the heights above. The valley of Porto da Cruz is celebrated for producing the finest wines of the northern coast of the island.

Fayal.[1]—On approaching Fayal from Porto da Cruz, the beds of two torrents, which join in the same ravine, near the sea, are crossed; the path is extremely rugged, and is carried, among rough boulders, along the bed of the western stream, towards the sea, for upwards of a mile. A short zigzag cut leads up the face of the cliff towards Sant' Anna, called the *ladeira do Fayal*,[2] but it is quite impassable on horseback, and the rider is recommended to take the more circuitous path by the sea, which, ascending by the church, leads to the same eminence. Like Porto da Cruz, Fayal possesses no attractions, nor any fine views of scenery, till the heights towards Sant' Anna are gained.

Sant' Anna.—The ascent towards Sant' Anna from Fayal is tedious and difficult, several precipices and rough rocks lying along the path. Where these, somewhat dangerous, passes occur, it is

[1] *Fayal*—A place where beech-trees grow.

[2] *Ladeira*—An abrupt, or steep path.

Penha d'Aguia (Eagles Rock), from the Lamaceiros.

advisable for the rider to dismount, especially if he be at all timid or nervous. On nearing the summit, the road is good, and a magnificent view is obtained of the extensive valley beneath, with the long ragged rocks of Saõ Lourenço stretching away towards the east. Continuing along a comparatively level and well-cut road overhanging the sea at an elevation of nearly 2,000 feet, and emerging through a pass cut in the mountain, the beautiful and richly cultivated plain of Sant' Anna opens to view. From this point to the hotel, the road is delightful, leading through groves of chestnut and other trees, festooned with vines, and interspersed with patches of corn and flax, a proof of the superior industry of this portion of the people. The position of the hotel of Sant' Anna is one of great loveliness, situated near the verge of a cliff upwards of a thousand feet above the level of the sea, and embosomed in vine-covered chestnut-trees. The landlord, Sñr. Luis Acciaioli, is exceedingly attentive and obliging, and his establishment is a favourite resort with many of those who pass the summer months in Madeira. The view from the hotel is truly superb, and includes the distant islands of Porto Santo, with the wide Atlantic stretching away to the north, the beautiful landscape of Saõ Jorge on the west, the heights above Fayal on the east, and the lofty Torrinhas, Pico Ruivo, and heights of Ribeiro Frio, closing in the vast amphitheatre behind. From Sant' Anna many delightful excursions may be made, such as

to the Boa Vista, from whence a view of the ravine of Saõ Jorge is obtained. The valley of Fayal and Porto da Cruz, with the view of the Penha d'Aguia to the east, and Pico Ruivo towards the south, if the weather permit, will amply repay the fatigue of a visit.

Pico Ruivo.—This is an object of some consideration, and the tourist should endeavour to start from the hotel at the earliest dawn of day, provided with a hammock to convey him to the summit, a trifling distance, from the point where the bridle-path ceases. The road is comparatively good, though the inclination is great, and passes through a serra covered with whin, broom and bilberry, over mountains of rock and bare turf, where, every now and then, the most enchanting views are met with. Near the summit, the hills are covered with enormous trees of heath, "*Erica arborea*," measuring from five to seven feet in circumference. The view from the Pico Ruivo, if the weather be fine, is indeed stupendous. The rugged surface of the island is seen below, rent into thousands of deep ravines and bristling crags. Later in the day the hills become enveloped in clouds or vapour, which throw a gloomy grandeur over the surrounding scene.

Saõ Jorge.—Crossing the ravine, to the west of the hotel of Sant' Anna, by a steep and rugged path, the parish of Saõ Jorge is entered, with its church and adjoining cottages, almost hid from the view, amidst a forest of vine-covered chestnut-trees. Con-

tinuing westward, over a tolerably level road, and crossing the Ribeiro Fundo,[1] another of the mountain torrents which intercept the roads along the whole northern coast, the splendid scenery of the Arco de Saõ Jorge opens to view. A level tract of land with quintas and cottages rises amidst a most luxuriant garden of cultivation, while a semicircle of steep and lofty mountains, rent into innumerable grotesque forms, encloses the plain behind, and forms altogether a scene of unequalled grandeur. The Voltas,[2] a splendid point for viewing the surrounding country, should not be passed without a visit. Leaving the delightful scenery of the Arco, and following the road towards the Entroza,[3] the path is carried along the face of a lofty cliff overhanging the sea, part of it suspended over the deep abyss below, and supported on simple brackets of wood projecting from the rock, with a low parapet to relieve the giddy feeling caused by the great elevation, and the noise of the sea as it lashes against the rocks immediately beneath. The ravine of Boa Ventura is now reached. At the bottom the romantic village of the same name lies nestling between the smaller hills which rise at the outlet of one of the grandest chasms of the north coast.

The road leading from Sant' Anna to Funchal by *Ribeiro Frio* (cold river), is remarkably good,

[1] *Ribeiro Fundo*—Deep river.
[2] *Voltas*—A place to turn at.
[3] *Entroza*—The cogs of a wheel.

and possesses some most magnificent points of view. For about two hours the ascent is gradual; but after passing the Ponte-grande on the Fajãa da Murta, a continued and steep ascent of nearly an hour is encountered. From the summit the road winds round the hills to Ribeiro Frio, and affords a view of the valley of Meio Metade, probably the finest scenery in the island. Crossing the bridge of Ribeiro Frio a rather steep ascent is again encountered; the first part of the road is well paved, but the latter part towards the "Feiteiras," a level tract of land, is rugged and uneven. Crossing this plain the ascent continues to the Poizo, about 4,500 feet above the sea, from whence the first view of Funchal is obtained, and from this point a path branches off along the ridge of mountains towards S. Antonio da Serra, another descends by the steep Caminho do Meio to Funchal; that by the Mount Church is however generally preferred.

CHAPTER XIV.

TOUR OF THE ISLAND CONTINUED.

Saõ Viçente.—Leaving Funchal by the Saõ Martinho road, leading to the westward, and passing through a richly cultivated district, the Estreito de Cama de Lobos is reached, where the finest wines of the island are produced. After crossing the bridge over the Ribeiro dos Soccoridos, and ascending the opposite side of the ravine, the road continues on towards the village of Cama de Lobos, and a branch, turning off to the right, ascends the mountains, by the Estreito church, to the verge of the Curral, or, turning off behind the church, leads to the same point by the

Jardim da Serra,[1] the beautiful summer residence of the late British Consul, Mr. Veitch. This quinta is well worthy of a visit. The walks are beautifully shaded with large chestnut and other trees, and adorned with various shrubs and flowers. The tea-plant has been successfully cultivated in the grounds; and the leaves are used by the proprietor in preference to the imported article. The plant, however, has not been allowed to extend itself to other parts of the island, where its cul-

[1] *Jardim da Serra*—Garden of the mountain forest.

tivation might probably be attended with advantageous results. Passing the Jardim, and ascending a somewhat rugged path, the brink of the Curral is gained.

Curral.[1]—This enormous ravine is the great "lion" of Madeira, and to it the first excursion is generally made by all lovers of natural scenery. From an elevation of 4,300 feet above the level of the sea, the church of the Curral is seen below at a depth of 1,654 feet from the point of view; and the prospect is bounded by lofty and almost perpendicular cliffs rising nearly 4,000 feet behind. Pico Ruivo, clothed in verdure, rears its lofty summit towards the east, and the bare rocky peaks of the "Torrinhas" appear like castellated fortresses on the summit of the mountains which close in the enormous chasm on the north. Continuing the ascent, and passing along a narrow path of sudden curves and angles, resembling the extensive bastions of some immense fortification, with deep and perpendicular precipices on the right, the beautiful and wild scenery of the

Serra d'Agoa[2] opens to view. The path then crosses the sharp and narrow ridges which divide these two bold and noble ravines, and winds along the face of the almost perpendicular cliffs beyond, at an elevation sufficiently great to try the nerves of the boldest rider. Magnificent trees of the laurel tribe shoot out from the otherwise bare rocks

[1] *Curral*, or *Curral das Freiras*—Nun's fold.

[2] *Serra d'Agoa*—Mountain torrent.

overhead, and the most luxuriant vegetation clothes the rich valley below. Crossing several romantic streams, and frequent landslips, caused by the falling rocks or the rush of waters from the heights above, the path continues the same winding course to the "Encumiada" of Saõ Viçente, and affords at every turning a new and diversified scene.

Encumiada.[1]—From this point the Atlantic, like an immense mirror, is seen stretching towards the horizon on either side. The valley of the Serra d'Agoa, and Ribeira Brava,[2] extends towards the sea on the south, and the deep ravine of Saõ Viçente lies between two lofty mountain-ridges extending their jagged peaks towards the north, the village reposing in solemn quietness below.

Saõ Viçente.—The descent to Saõ Viçente is exceedingly abrupt and fatiguing; and although the sea appears immediately below, it seems to recede, like an "ignis fatuus," as the distance is shortened. The hotel is situated a little beyond the village of "Magdalena," at some distance from the coast, and affords but indifferent accommodation, and scarcely anything in the culinary department. The road continues, from the hotel towards the village of Saõ Viçente, along the elevated banks of the torrent, through orchards and orange groves, and is delightfully shaded by lofty chestnut-trees, from whose branches the vines hang in graceful festoons. The church, and village,

[1] *Encumiada*—Ridge of the mountain.
[2] *Ribeira Brava*—Wild river.

which gives the name to the ravine, lie in a deep hollow near the coast, protected from the northern blasts by the "Achada,"[1] an elevated plain which forms, as it were, a natural wall between the village and the sea, with lofty precipices rising on each side. On emerging from this basin, a curious insulated and hollow rock rises on the beach in front. This rock has been converted into a chapel,[2] by the addition of a door and a few steps. Here the torrent is crossed, and the irregular and rugged path is continued along the margin of the sea, with towering cliffs overhead, at one point crossing the brow of an abrupt and lofty headland, with a low parapet to shut out the dizzy view of the rocky coast below, and then again descends and winds onwards towards Ponta Delgada.

Ponta Delgada.[3]—This village is situated on a long narrow point of land jutting out from the base of the mountain ridge behind, and embosomed in trees. The visitor wishing to sojourn at Ponta Delgada, will find accommodation, but probably little else, in the house of Sñr. Jozé de Abreu; in these excursions, however, the tourist, as has been already advised, must be in some measure independent of the village cuisine of Madeira.

Boa Ventura.[4]—After passing Ponta Delgada,

[1] *Achada*—A level piece of ground.
[2] *A Ermida*—or Hermitage of Saõ Viçente.
[3] *Ponta Delgada*—Narrow point.
[4] *Boa Ventura*—Good fortune.

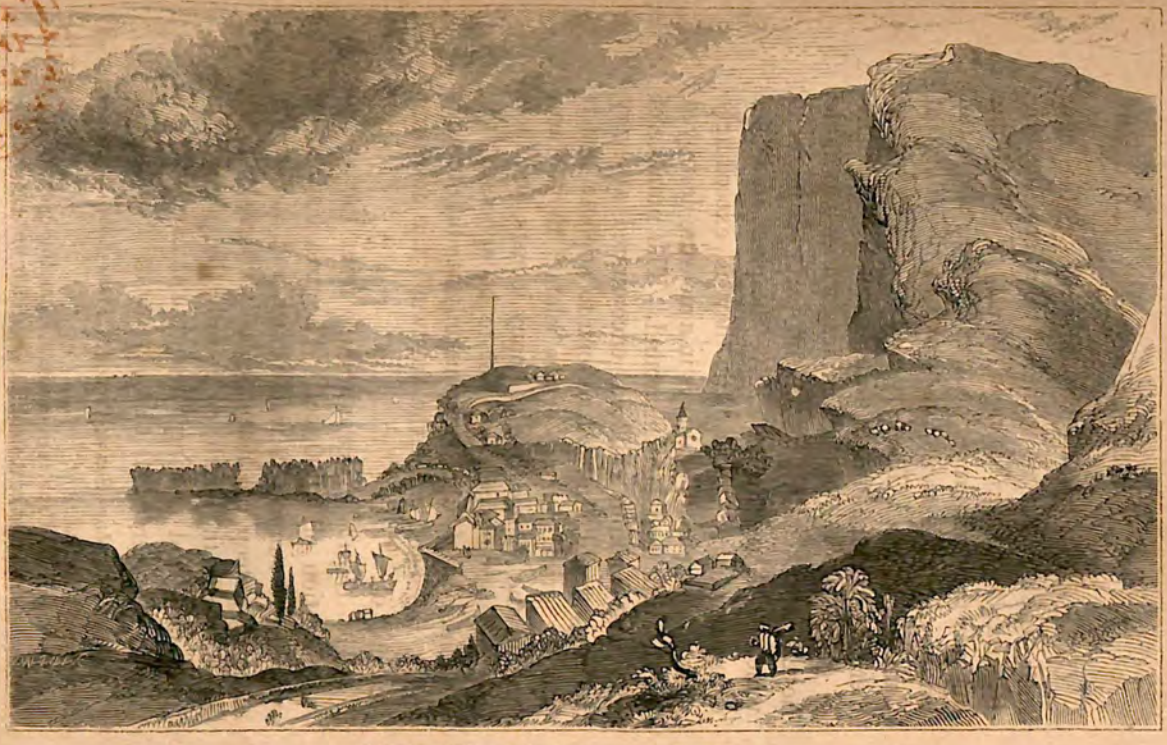
the road to Boa Ventura is a continuation of irregular ascents and descents. At this village indifferent accommodation may be obtained at a house belonging to a relative of the Curate; but, though an interesting and romantic spot, the village of Boa Ventura offers little inducement for a lengthened sojourn. Crossing the ravine to the east of the village, the road ascends along the sea-cliffs of the Entroza to the Arco de Saõ Jorge, which has been already described in the excursions from Saõ Jorge.[1]

Torrinhas.[2]—Taking an inland direction from Boa Ventura, the tourist ascends, by the lofty Torrinhas, to the Curral; the road for a considerable distance is good, and the ascent gradual. On reaching the upper part of the ravine, the inclination becomes most abrupt and terrific. The path is narrow and paved with large smooth stones, passing at intervals along the brink of deep ravines, with towering precipices above, and winding in a zigzag direction over the narrow ledge of rocks, or turning some acute angle, where a false step would send horse and rider rolling into the rocky abyss below. The scenery is stupendous and grand beyond description; lofty and richly-wooded rocks rise abruptly in front, without any seeming outlet, till a sudden turn in the path brings a new and similar difficulty to view. Grand and magnificent, however, as the scenery certainly is, it barely repays one for the continued anxiety and nervous feeling occasioned

[1] See page 153.

[2] *Torrinhas*—The towers or turrets.

by passing along these narrow and dangerous paths; and visitors are strongly recommended to avail themselves of the hammock, as a means of conveyance on such excursions, as the danger incurred on horseback will probably deprive them of the pleasure which might otherwise be derived from contemplating the beauty and grandeur of the scenery. The pass of the Torrinhas is gained after a toiling ascent of nearly three hours duration, and from this elevated point a magnificent view is obtained of the deep ravines and beetling crags stretching towards the north, and the lofty Pico Ruivo towering in solemn grandeur behind. The rugged heights encircling the Curral stretch out on either side, and the church and buildings appear like mere toys at the bottom of the deep valley below. The elevation is considerably upwards of 5,000 feet above the level of the sea, but the descent to the bottom of the Curral is by no means so abrupt or fatiguing as might be expected from such a height. Having reached the church, situated on a small elevated plateau, there is no object of interest to induce the tourist to prolong his stay. Ascending the winding path towards Funchal, from the bed of the Curral, the *vista*, or view of this deep mountain-gorge, is reached. From this point the road winds round a series of steep hills towards Funchal, without any parapet or protection on its outer edge; and after one or two abrupt and rugged descents, joins the Sant' Antonio road a short distance above the church.



Village of Cama de Lobos, and Cape Giram.

Cama de Lobos[1].—Proceeding along the new road to the west of Funchal, and crossing the Ribeira dos Soccoridos near the sea, or descending towards the coast from the level ground above the bridge of the Estreito, we arrive at the village of Cama de Lobos. There is nothing in this spot to merit notice. The inhabitants are composed chiefly of fishermen and their families, whose miserable hovels, or caves dug in the soft parts of the rocks which overhang the town, give the place an aspect of great misery. The little bay is exceedingly picturesque, but its beauty is in a measure destroyed by the filth and stench around. The number of miserable looking children, encountered at every turning, would almost lead one to suppose that it was the grand nursery of the island; they swarm around the visitor like so many locusts, and their begging propensities are not to be appeased, the presentation of a few coppers only tending to augment the band. To the westward the towering sea-cliff of

Cape Giram[2] rises abruptly from the sea to an elevation of 1,600 feet. The road leading towards the summit is well paved, and, though exceedingly steep, the ascent is easily effected. Turning towards the south, on gaining the ridge of the mountain, and passing through a thicket of pine-trees, the verge of this enormous headland is

[1] *Cama de Lobos*—Sea-wolf's den. From *Lobos Marinhos*, sea-wolves or seals.

[2] *Cabo giram*—Cape turn-again. From this point Zargo's companions returned to their ships, after their first survey.

arrived at. The view, for those who have sufficient nerve to support them so near the brink, is grand and terrific; the passing boats below appear like mere specks on the surface of the ocean. The whole line of coast as far as the Garajáo is visible, and, with the adjoining hills and ravines, presents to the eye a varied and charming panorama.

Passing Cape Giram, the road winds along the hills to Campanario, from whence a path leads off towards the Jardim da Serra and Curral, descending to Ribeira Brava, and passing through the rich districts of Ponta do Sol and Canhas, over a rugged and unpleasant road with a continuation of rapid ascents and descents, but with little to interest the tourist, until, after a long and fatiguing ride, he reaches the village of Calheta.

Calheta.[1]—On account of the long and tedious journey by land, a visit to Calheta is usually performed by sea. The boat passes under the lofty and bare cliff of Cape Giram, on the face of which the ladder path, employed by the labourers in blasting the rocks for building purposes, many years ago, when they were interrupted by the sudden explosion of a mine, is still seen, along with the tools of the workmen, suspended from the rock at an elevation of several hundred feet from its base. The coast as far as Calheta is bold and rugged; the village ports of Ribeira Brava and Ponta do Sol are passed, and a sail of about five hours from Funchal will generally enable the

[1] *Calheta*—A small creek.

tourist to land at Calheta. The hotel, the most comfortable of the village inns of Madeira, is situated some distance from the beach. The landlord, Snr. Drummondo, is exceedingly obliging and attentive to visitors, and will procure the necessary conveyances for excursions to the Prazeres,[1] Fajãa d' Ovelha,[2] and the springs of Rabaçal.[3] The road continues along the coast, and close to the sea, with few interruptions, as far as Ponta do Pargo. With this district of the island so little intercourse is kept up, that the peasantry are more primitive and unsophisticated than the natives of any other part of Madeira.

Rabaçal and *Paül da Serra.*[4]—The ascent from Calheta to the Paül da Serra is exceedingly abrupt, and the road wretched in the extreme. An enchanting view, however, from time to time presents itself. On reaching the ridge of mountains which divide the north and south coasts of the island, the magnificent scenery of the ravine of Ribeira da Janella[5] bursts on the view. Towards the south the villages and heights of the Arco da Calheta, Calheta, and Paül do Mar stretch along the coast. The Paül da Serra, a vast uninhabited plain, 5,159 feet above the sea, nearly nine miles long and three broad, extends its bleak and gloomy

[1] *Prazeres*—Pleasures.

Fajãa d' Onelha—A sheep down, or plain for rearing sheep.

[3] *Rabaçal*—From Rabaça, a plant, a species of water parsley. (Laver Lat.) Rabaçal, a bed of the same.

[4] *Paül da Serra*—Marshy-ground on the hills.

[5] *Ribeira da Janella*—Window river.

surface, along the mountain ridge, towards the east, partly covered with thick brushwood, or bare sands, and affording in some places a scanty pasturage for cattle. A short descent towards the north brings the tourist to the waterfall of Rabaçal, from which the supply of water, for irrigating the lands above Calheta, was to be obtained, and conveyed by a *levada*, through an extensive tunnel, to the south side of the island. The volume of water is sometimes considerable, and falls from an almost perpendicular height of nearly a thousand feet, with numerous minor streams trickling down the face of the rock, at the head of the deep and narrow ravine, where the Ribeira da Janella commences. The view from the levada, over which the mass of water forms a graceful arch as it descends into the ravine beneath, is grand and imposing. The water-course, which is looked upon as one of the greatest island works of modern times, has been already described in the present work.[1]

Crossing the Paül da Serra, the road descends to Saõ Viçente; it is painfully abrupt, and, like the bed of a torrent, strewed with large boulders which have been carried down by the heavy rains that fall, at certain seasons; with fearful force on this side of the island.

From Saõ Viçente the tourist may proceed on to Sant' Anna, or return to Funchal by the Serra d' Agoa, both of which routes have been described in the present and preceding chapters.

[1] See page 47.

APPENDIX.

(A.)—Page 10.

Population, &c. of Madeira and Porto Santo, from the Census taken December, 1849.

1849. Municipalities.	Number of Parishes.	Number of Families.	Inhabitants.			Births.			Deaths.			Marriages.
			Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
Punchal	9	6,841	13,619	15,764	29,383	504	516	1,020	357	344	701	162
Santa Cruz	4	1,613	3,585	3,700	7,285	156	150	306	66	71	137	75
Machico	4	1,277	2,676	2,815	5,491	98	91	189	34	29	63	30
Sant' Anna	5	2,655	5,905	5,736	11,641	213	190	403	130	128	258	82
Sao Viçente	5	2,865	5,620	5,834	11,454	221	199	420	142	132	274	54
Calheta	8	3,287	7,302	7,977	15,279	254	297	551	139	146	285	104
Ponta do Sol	6	3,426	7,337	8,013	15,350	307	261	568	162	166	328	80
Cama de Lobos	4	2,410	5,922	6,469	12,391	218	236	454	87	107	194	69
Total of Madeira	45	24,374	51,966	56,308	108,274	1,971	1,940	3,911	1,117	1,123	2,240	656
Porto Santo	1	450	900	910	1,810	47	30	77	24	29	53	16
Grand Total	46	24,824	52,866	57,218	110,084	2,018	1,970	3,988	1,141	1,152	2,293	672

Population of Madeira and Porto Santo, with the extent of Emigration, from the various Returns since 1835.

Population.		Emigration.	
Years.	Total.	Years.	Total.
1835.....	115,446	1835.....	—
1839.....	115,761	1839 to 1841...	9,000
1843.....	119,041	1842 to 1846...	5,600
1847.....	106,486	1847.....	4,000
1848.....	106,603	1848.....	300
1849.....	110,084	1849.....	330
1850.....	—	1850.....	1,300

British Population in Madeira in 1850.

81 Families. 317 Persons.

(B.)—Page 28.

The British Chaplain is nominated by the members of the congregation who are entitled to vote;[1] and if the person so named be approved of by Her Majesty's Government, and found duly qualified for the office, he receives his appointment from the Crown, holding such appointment "for and during Her Majesty's pleasure and no longer." The Act 6 Geo. IV. chap. 87, commonly called the Consular Act, regulates all matters connected with the support and management of the British Chapel in Madeira. It was formerly the custom, on Her Majesty's appointing the chaplain, to obtain for him a licence from the Bishop of London. This licence was, however, very different from a

[1] Persons who have contributed 20*l.* towards the church-fund, and paid 3*l.* sterling during the year, are entitled to vote.

Bishop's licence for the cure of souls in England, since no English Bishop can, properly speaking, have any jurisdiction in a foreign diocese; the present Bishop of London describes it "as nothing more than a certificate from me to Her Majesty's Government, on one side, and the British residents on the other, of my belief that the clergyman to whom it is given is a respectable person." The licence ceases with the appointment, or rather lapses on its cancelment; this has been settled by the unanimous decision of four judges, sitting in Banco, in the analogous case of Reg. *v.* Middlesex Pauper Lunatic Asylum (Visiting Justices), 2 Q.B. 483.

The original regulations regarding a bishop's licence emanated from the Foreign Office; these have been recently cancelled, and others substituted in their place, in which the necessity of a bishop's licence to a foreign chaplaincy is done away with for the present; the Secretary of State taking care to ascertain that a clergyman is duly qualified for the situation, before his appointment takes place. One-half of the chaplain's stipend is paid by Her Majesty's Government, and the other moiety by the residents.

(C.)—Page 30.

The Hospital of Saõ Lazaro was founded by the municipality in 1665, and receives from the Government an annual allowance of 150 dollars. Various donations and legacies have been made to the establishment, from time to time, by private individuals,

which have enabled the authorities to make considerable additions to the building. About two-thirds of the patients are males. The usual age of those affected with elephantiasis is from fifteen to twenty-five years, and none of the patients exceed the age of fifty; the majority die from the disease extending to the organs of voice, respiration, and digestion.

(D.)—Page 30.

The first Hospital existing in Funchal was founded by Zargo, in 1454. In 1483 it was transferred to grounds granted, in the district of Santa Maria Maior, where the Rua do Hospital Velha now exists, by Alvaro Affonso, and his wife, Constança Vaz, for that purpose.

The Santa Casa de Misericordia, the present hospital, was founded by royal charter, in 1511, and the income of the former institution was annexed to it in 1514. The establishment continuing to flourish, and receiving many gifts and legacies, enabled the authorities to erect the present building in 1685, under the direction of Pedro de Lima, then governor and captain-general. There are also hospitals at Santa Cruz, Machico, and other parts of the island, but they are totally neglected, and possess neither furniture, medicines, nor any other requisite.

(E.)—Page 33.

Receipts and Expenditure of the Camara, or Municipality of Funchal, from 1st July, 1848, to 30th June, 1850.

Receipts.	Year ending 30 June, 1849.	Year ending 30 June, 1850.	Expenditure.	Year ending 30 June, 1849.	Year ending 30 June, 1850.
	Reis.	Reis.		Reis.	Reis.
Balance on hand	4,143 385	4,133,505	Erecting Tombs in Cemetery	180,805	—
Debts received	222,840	522,541	Repairing & opening Roads, Streets, Bridges, and Fountains	3,681,795	3,233,292
Imposts on Foreign Grain, &c. and Flour	10,191,000	10,634,850	Ditto Watercourses	45,000	196,985
,, Wine	3,081,850	2,791,240	Lighting Streets	588,000	742,000
,, Salt	1,086,920	811,390	Support of Foundlings	5,937,230	6,327,900
,, Indian Corn	7,307,077	10,695,670	Hospital for Lepers, and cost of Medicines	1,465,675	1,311,653
,, Meat	5,200,000	4,766,740	Mendicity Asylum	725,920	800,000
Licences on Stores, Taverns, Bakeries, &c.	2,913,400	3,427,000	Support of Schools, Salaries to Professors, Library, &c.[2]	2,361,968	2,665,116
Pension from Government for Sao Lazaro	150,000	150,000	Support of Prisoners and Charities[3]	406,000	120,000
Ground Rents	195,354	385,152	Salaries and Gratuities	6,570,956	8,090,728
Rentals	20,000	71,000	Rentals	543,465	499,000
Fines for infringing Municipal Laws.	245,300	83,750	Ground Rents	51,199	28,102
Sale of Burial Grounds	608,500	737,000	Public Festivals	236.655	255,312
,, Masonry in ditto	90,000	90,000	Stationery and other requisites	291,805	219,260
Stamping Weights and Measures	300,000	180,000	Sundry expenses	883,183	977,109
Donations, &c.	52,995	170,783	Debts paid	1,810,425	3,025,800
Rental of Fish Market, &c.	115,050	—	Imposts on Grain, &c. paid to other Municipalities	4,960,085	4,698,869
			Balance on hand	4,133,505	6,399,495
	35,923.671	39,650,621		35,923,671	39,650,621

(1) The expense attending the support of foundlings for the year ending June, 1848, was 4,724,430 rs., showing an increase in two years of upwards of 1,600 dollars, and affording a conclusion by no means favourable to the morality of the inhabitants. The foundlings are placed in a circular box, or turnstile, built for that purpose in the outer wall of the hospital, and are received inside by the *ama geral*, or head nurse, appointed by the Camara, and by her they are handed over to under nurses in various parts of the island.

(2) The outlay for books and library expenses, in 1848-9, amounted to 58,300 rs., and for the year ending June 1850, to 6,600 rs.

(3) The prisoners are obliged to work for their support, their allowance being merely nominal, and dispose of the produce of their labours at the gratings of the lower windows of the prison.

(F.)—Page 37.

The following extract from the laws relating to the liberty of the press, issued at Lisbon in August 1850, and now in full force, may be interesting, as showing the despotic tendency of the Portuguese Government. And the present Governor of Madeira has made known his determination to enforce "the full penalties imposed by law, on all parties who, directly or indirectly, endeavour to promote proselytism among the subjects of Portugal, contrary to the Catholic and Apostolic religion of Rome."

"Enumeration and classification of crimes or delinquencies committed by the publication of ideas, by words, by writing, or through the press."—*Tit. I. chap.* 1.

"All persons can communicate their ideas by words, by writing, or through the press, independent of censorship, but are responsible for the abuses they may commit in the exercise of this right, in the manner and by the form the law may determine."—*Carta Constitucional, Art.* 145.

Chap. 2.—"A crime is committed by the publication of thoughts that deny, or throw a doubt upon, any dogma defined by the Catholic Church, or that defend, as a dogma, the doctrines condemned by that Church."

"Blasphemy against God or the saints, or making a mockery or derision of the Catholic religion, or divine worship approved of by that Church, ... are punishable . . . . if published, sold, or placarded in different places, or public meetings, by imprisonment

from six months to three years, and a fine of one hundred to one thousand dollars. . . . . If committed in conversation, or by words publicly uttered in a loud tone of voice, they are punishable with imprisonment of from three to eighteen months, and a fine of fifty to five hundred dollars." . . . . ! !

(G.)—Page 37.

The Collegiate Chapter of the Santa Sé, or Cathedral of Funchal, consists of five dignitaries, twelve canons, and four minor canons.

The dignitaries are Dean, Archdeacon, Precentor, Professor of Theology, and Chief Treasurer.

The Dean possesses an income of 7 moios and 34 alqueires, equal to about 162½ bushels of wheat, 11 pipes of wine, 64 lbs. of white sugar, 12 kids, 12 fowls, and 27,700 rs. in money. The other dignitaries receive each 4 moios and 23 alqueires of wheat, 9 pipes of wine, and 26,700 rs. in money.

The Canons receive each 3 moios and 10 alqueires of wheat, 7 pipes of wine, and 20 dollars in money. The Minor Canons receive each 2 moios and 11½ alqueires of wheat, 4 pipes of wine, and 13,350 rs. in money. The *Conego de Penetenciario*, or Canon who has charge of the confessional, receives 20 dollars additional per annum.

There are also attached to the Cathedral ten Chaplains, each receiving 84 alqueires of wheat, 3 pipes of wine, and 7 dollars; and one Sub-Precentor, whose

income is 90 alqueires of wheat, 3½ pipes of wine, and 9 dollars.

Chief Sacristan: income, 8 pipes of wine, 87 alqueires of wheat, 64 lbs. of wax, and 8 dollars.

Altareiro, or Verger: income, 2 pipes of wine, 1 moio of wheat, and 6,600 rs. in money.

Chapel Master: income, 3½ pipes of wine, 90 alqueires of wheat, and 9 dollars.

Organist: income, 2 pipes of wine, 84 alqueires of wheat, and 5,400 rs. in money.

Master of the Ceremonies: income, 1 pipe of wine, 30 alqueires of wheat, and 5,400 rs. in money.

Six Choristers: who each receive ½ pipe of wine, ½ moio of wheat, and 2 dollars per annum.

Two Curates: each, 7 pipes of wine, 90 alqueires of wheat, and 12 dollars per annum.

A Beadle: whose income is 1 moio of wheat, 1 pipe of wine, and 5,400 rs. in money.

A Bell-ringer: income, 1½ pipes of wine, 30 alqueires of wheat, and 4,800 rs.

All these incomes pay to Government a *dizimo*, or tithe, of 6 alqueires on each moio of wheat, 3 almudes on each pipe of wine, and 15 per cent. on money.

At present there is no Dean, nor Precentor, and only six Canons and two Minor Canons.

(H.)—Page 62.

Exports of Wine from Madeira, during the Year ending the 31st of December, 1850, from Official Returns.

Where Exported.	Pipes.	Where Exported.	Pipes.
As Ship's Stores	102	Exports brought forward	1,672½
To Antigua	144	To Laguna, Teneriffe	1½
Barbados	4½	Lisbon	584
Bergen	35	Liverpool	30¾
Bombay	14	London	1,679
Bremen	156	Madras	143¼
Calcutta	41¼	Marseilles	3
Cape de Verde	3	Mauritius	69½
Cayenne	3¼	Monte Video	2¾
Charleston	70¼	Nassau	8½
Constantinople	125	New York	1,707¾
Cuba	1¾	Santa Cruz, W. I.	40
Demerara	171¼	St. Michael's and the Azores	51
Elsineur	29¼		
Figueira, Spain	3	St. Petersburgh	1,010½
Gibraltar	4¼	St. Thomas, W. I.	42¼
Guadaloupe	10½	St. Vincent	65¾
Hamburgh	542	Southampton	12½
Jamaica	211¾	In small quantities	1½
Carried forward	1,672½	TOTAL	7,125½

Exports during 1849 . . . 7,379 pipes.

Exports of Wine from Madeira during the following Years.

Years.	Pipes.	Years.	Pipes.	Years.	Pipes.
1825	14,432	1841	7,157	1845	7,179
1830	5,499	1842	6,270	1846	8,190
1835	7,730	1843	7,885	1847	5,577
1840	7,975	1844	7,054	1848	5,829

The export duty on all wines shipped from Madeira previous to 1834, amounted to 8,700 reis (or 40*s.* 5*d.*) per pipe of 23 almudes, or 92 imperial gallons. In 1834 this duty was reduced to 4,800 reis (or 20*s.*) per pipe. With additional charges, however, which have since been added, the export duty now amounts to 5,530 reis (or 23*s.* $0\frac{1}{2}d.$) per pipe of 92 imperial gallons.

A large portion of the wine shipped from Madeira to the East and West Indies, is thence conveyed to ports in the United Kingdom, and appears in the English markets as East or West India Madeira.

The greater part of that exported to Hamburgh, and ports in the Baltic, is of the most inferior description.

The wines sent to Lisbon are there re-shipped to Hamburgh, where, together with those imported direct from Madeira, they are said to be converted into hock for the English markets.

Total Quantities of Madeira Wine Imported, Exported, and Retained for Home Consumption, in the United Kingdom, for Ten Years.

Year.	Imported.	Exported.	Retained.
	gallons.	gallons.	gallons.
1840	279,157	143,829	112,555
1841	215,253	146,283	107,701
1842	200,443	107,662	65,209
1843	245,498	101,412	93,589
1844	226,660	149,037	111,577
1845	213,229	137,641	102,715
1846	205,406	138,491	94,580
1847	201,096	100,506	81,349
1848	154,701	86,430	76,938
1849	165,463	129,897	71,097

Total Quantities of Madeira Wine Imported into the United States of America, from the 1st July, 1844, to 30th June, 1850—six years.

Year ending 30 June.	Gallons.	Year ending 30 June.	Gallons.
1845	101,176	1848	44,634
1846	109,797	1849	193,971
1847	130,923	1850	303,125.

Vessels entered at the Port of Funchal during the year 1850.

Nations.	Vessels of War.			Merchant Vessels.				Total of Vessels Entered.
	Sailing Vessels.	Steam Vessels.	No. of Guns.	Sailing Vessels.	Steam Vessels.	Tonnage.	Value of Cargoes.	
American	8	...	92	24	...	4,635	£20,700	32
Danish	1	...	12	3	...	672	1,200	4
Dutch	...	1	2	...	...	...	...	1
English	23	17	305	108	10	30,065	62,310	158
French	1	6	34	9	...	3,413	...	16
Greek	...	...	...	4	...	1,079	4,200	4
Hanoverian	...	...	...	1	...	76	1,000	1
Mecklenburg ...	...	...	...	1	...	330	1,250	1
Neapolitan	1	...	20	...	...	...	...	1
Norwegian	...	...	...	1	...	80	750	1
Portuguese	1	1	22	104	...	12,027	56,980	106
Prussian	1	...	6	...	...	...	...	1
Russian	2	...	104	1	...	110	...	3
Sardinian	1	...	16	12	...	1,073	12,300	13
Spanish	...	1	2	8	...	666	1,500	9
Tuscan	...	...	...	1	...	138	800	1
TOTAL	39	26	615	277	10	55,264	£162,990	352

Vessels Entered during the Nine Years preceding 1850.

Year.	War.	Mer-chant.	Total.	Year.	War.	Mer-chant.	Total.
1841	54	295	349	1846	73	334	407
1842	70	296	366	1847	86	320	406
1843	62	302	364	1848	74	287	361
1844	57	320	377	1849	58	279	337
1845	85	237	322				

The Customs receipts at Madeira, including the municipal impost on grain, &c.—

For 1840, amounted to . .	129,492	dollars.
1850 „ . .	119,344	„
Decrease in 11 years . . .	10,148	„

(I.)—Page 71.

Dr. Fothergill, who wrote so far back as 1775, and Dr. Gourlay, in 1811, have alike established the great advantages of the climate of Madeira as regards its mildness and equability of temperature, and its beneficial effects on pulmonary diseases. Till the late Dr. Renton, however, brought the subject before the medical world, in a paper published in the *Edinburgh Medical and Surgical Journal*, in 1817,[1] its advantages were not generally known or appreciated in England; and the observations made by Dr. Heineken, and published in the *Medical Repository*, in 1824,[2] have placed it, as a winter resort for invalids, probably above any other spot in the northern hemisphere. That the climate of Madeira can prolong life, even under the

[1] Vol. xxvii. 1817. [2] Vol. xxii. 1824.

most unfavourable circumstances, the case of Dr. Heineken will afford a sufficient proof. This gentleman repaired to Madeira in 1820, when his case was pronounced, by some of the most acute physicians in Britain, as rapidly approaching to a fatal termination; yet, under these circumstances, he managed to live in comparative comfort for nine years. His death was ultimately occasioned by exposure to the night air while returning from the adjacent islands of Porto Santo, in an open boat; a storm arose during the passage, from the effects of which he rapidly sank, and died within a few hours of his return to Funchal. Dr. Renton, who, at his request, performed the autopsy, expressed himself astonished how he could have sustained life with so small a portion of his respiratory organs, scarcely a vestige of one of his lungs remaining, and the other in a condition which could not exist in England.[1]

Sir James Clark, in his valuable work on Climate,[2] says: "The mean annual temperature of Funchal, the capital of Madeira, is 64°, being about 5° only above that of the Italian and Provençal climates. This very moderate mean temperature, relatively to its low latitude, arises, however, from the circumstance of the summer at Madeira being proportionally cool; for, whilst the *winter* is 20° warmer than at London, the *summer* is only 7° warmer; and whilst the winter is 12° warmer than Italy or Provence, the summer is nearly 5° *cooler*. The mean annual range of tempera-

[1] See "Wilde's Narrative of a Voyage to Madeira," &c. Longman & Co.: London, 1840.

[2] "The Sanative Influence of Climate." London: J. Murray, 1846.

ture is only 14°, being less than half the range of Rome, Pisa, Naples, and Nice. The heat is also distributed throughout the year with surprising equality, so that the mean difference of the temperature of successive months is only 2°.21; this at Rome is 4°.39, at Nice 4°.74, at Pisa 5°.75, and at Naples 5°.08. When we take into consideration the mildness of the winter, and the coolness of the summer, together with the remarkable equality of the temperature during the day and night, as well as throughout the year, we may safely conclude that the climate of Madeira is the finest in the northern hemisphere. There is no occasion for a person throughout the winter in Funchal, to breathe, night or day, within doors, an atmosphere below the temperature of 64°; or in the country, during the summer, at such a height as to ensure dryness, above that of 74°. That great and lasting benefit is to be derived from a temporary residence in the climate of Madeira, many living examples, Dr. Renton remarks, sufficiently prove. But even under such comparatively favourable circumstances, it ought to be strongly impressed on the mind of the invalid, that half-measures are worse than useless, and that no advantage is to be derived from climate, unless it be seconded by the utmost caution and prudence on his part."

(K.)—Page 87.

Some parts of Spain have been much recommended of late years, as winter resorts for invalids. Among these Malaga stands preeminent; its climate, however, mentioned by some of the leading medical men in

England as being equal to that of Madeira, appears to have been considerably overrated, as many of the latest sojourners there have found to their cost. The following Table, which has been kindly furnished by Dr. Shortliff, of Malaga, may not therefore be out of place, as it affords a comparison between the climates of Madeira and Malaga, though much milder and more equable than the Tables of Temperature for some years preceding.

From this Table (see next page) we find the annual range of temperature at Malaga, from observations taken during the day, to be 38°, while at Madeira it is only 22°.5′; the temperature at Malaga being 7° lower during the winter, and 9° higher during the summer, than that of Madeira.

An example of the ignorance of some medical writers with regard to the climate of Madeira, occurs in a work by James Bright, M.D., entitled "A Practical Synopsis of Diseases of the Chest," &c. published by J. Churchill, London, 1850. "Madeira," says this writer, "on account of its genial temperature, is well suited to invalids suffering under pulmonary disease, from November till June. In the intermediate period, however, the heat is almost insupportable; hence many persons, in order to escape the depressing influence of the sultriness of the climate during the hot months, take a voyage to Teneriffe." The heat during the period from June to November is not at all insupportable; and during upwards of fifteen years' residence in Madeira, the author never heard of an instance of any one taking a voyage to Teneriffe for the purpose of escaping the sultriness of the climate, as there they would certainly meet with a much higher temperature than

Table showing the Highest and Lowest Temperatures observed at Malaga, at the hours noted, with the Mean of each hour and each month, deduced from daily observations.

1849.	8 A.M.			2 P.M.			11 P.M.			Annual Mean.	
Months.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Malaga at 8, 2, & 11. — 1850.	Madeira at 8, 2, & 10. — 1850.
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.
January	60	52	54.2	64	56	58.6	58	52	53.5	55.43	60.77
February	62	53	55.9	65	53	57.1	61	50	55.1	56.03	60.99
March	63	55	57.5	67	57	60.9	66	56	58.8	59.06	63.07
April	64	57	60.9	68	58	64.5	66	58	61.2	62.20	66.95
May	71	62	65.2	77	67	67.6	72	61	64.6	65.80	67.75
June	79	70	73.1	81	71	76.6	79	69	74.1	74.73	66.49
July	82	74	76.5	84	78.	79.6	80	73	77.1	77.73	69.25
August	80	75	77.1	84	78	79.9	80	76	77.2	78.02	69.54
September	77	71	73.3	80	74	76.9	77	73	73.9	74.70	69.40
October	75	58	68.3	78	63	71.6	76	58	71.8	70.57	69.67
November	65	46	60.7	68	50	64.9	65	49	60.2	61.93	65.93
December	60	51	55.0	63	55	59.1	80	53	55.8	56.63	63.05

than in Madeira. The mean temperature for each month at Santa Cruz, Teneriffe, according to Sir James Clark, is as follows :—

January.	February.	March.	April.	May.	June.	
deg. 63.84	deg. 64.29	deg. 67.17	deg. 67.32	deg. 72.12	deg. 73.89	
July.	**August.**	**September.**	**October.**	**November.**	**December.**	**Year.**
deg. 77.27	deg. 78.89	deg. 77.43	deg. 74.66	deg. 70.43	deg. 65.82	deg. 70.94

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Tables of Moneys, Weights, and Measures current in Madeira.

Accounts in Madeira are kept in reis, an imaginary coin, equal to one-fifth of a farthing; 1,000 reis being *mil-reis*, or one dollar.

The calculation is similar to that of the United States currency, with a unit added; thus, 10 cents = 100 reis, 100 cents = 1,000 reis, or *one dollar*.

PORTUGUESE COINS.

	Reis.		£	s.	d.
Copper.	5	Cinco-reis	=	0	0 0½
	10	Dez-reis	=	0	0 0½
	20	Vintem	=	0	0 1

SPANISH COINS.

	Reis.		£	s.	d.
Silver.	50	Meio Tostaõ, or half-bit	=	0	0 2½
	100	Tostaõ, or bit	=	0	0 5
	200	Dois Tostões, or pistareen	=	0	0 10
	1,000	Pataca, or dollar	=	0	4 2
Gold.	2,000	One-eighth doubloon	=	0	8 4
	4,000	Quarter doubloon	=	0	16 8
	8,000	Half doubloon	=	1	13 4
	16,000	One doubloon	=	3	6 8

ENGLISH COINS.

	£	s.	d.		Madeira Currency. Reis.
Gold & Silver.	0	0	6	Sixpence	= 120
	0	1	0	Shilling	= 240
	0	2	6	Half-crown	= 600
	0	10	0	Half-sovereign	= 2,400
	1	0	0	Sovereign	= 4,800

AMERICAN COINS.

	Cents.		£	s.	d.		Reis.
Silver.	5	Half-dime =	0	0	2½	=	50
	10	Dime =	0	0	5	=	100
	50	Half-dollar =	0	2	1	=	500
	100	Dollar, U. S. or Mexican =	0	4	2	=	1,000
Gold.	250	Quarter-eagle =	0	10	5	=	2,500
	500	Half-eagle =	1	0	10	=	5,000
	1,000	Eagle =	2	1	8	=	10,000
	2,000	Double-eagle =	4	3	4	=	20,000

Rate of Exchange on Bills in Madeira.

At the *par of exchange* between Madeira and London, a *mil-rei*, or dollar, is equal to *5s. 6d.*, and a pound sterling to 3,636$\frac{2}{10}$ reis. The sovereign, however, by a decree of the Portuguese Government, being current in Madeira at 4,800 reis, gives *4s. 2d.* for a mil-rei, or 32 per cent. premium on the *par of exchange*. This premium, or rate of exchange on bills in Madeira, fluctuates according to the demand. The following Table will show the value, in Madeira currency, of 100*l.* sterling, according to the premium, from 25 to 36 per cent.

Premium.	Madeira Currency.	Premium.	Madeira Currency.	Premium.	Madeira Currency.
Per Cent.	Reis.	Per Cent.	Reis.	Per Cent.	Reis.
25	454,545	29	469,091	33	483,636
26	458,182	30	472,727	34	487,273
27	461,818	31	476,364	35	490,909
28	465,455	32	480,000	36	494,543

WEIGHTS.

72	Graõs	=	1	Oitava	=	2	Drams, Avoirdupois.
8	Oitavas	=	1	Onça	=	1	Ounce ,,
16	Onças	=	1	Arratel, or libra	=	1	Pound ,,
32	Libras	=	1	Arroba	=	32	,, ,,
4	Arrobas	=	1	Quintal	=	128	,, ,,
13⅓	Quintais	=	1	Ton, Portuguese.			
17½	Quintais	=	1	Ton, Avoirdupois.			

N.B. These weights are 1⅛ per cent. heavier than those of England.

LIQUID MEASURE.

1	Quartilho	=			1⅛	Gill, Eng. Imp.
4	Quartilhos	=	1	Canada or	2¾	Pints ,,
14	Canadas	=	1	Almude or	4	Gallons ,,
23	Almudes	=	1	Pipa or	92	,, ,,

DRY MEASURE.

2	Selamins	=	1	Maquia or	1$\frac{1}{20}$	Pints, Eng. Imp.
16	Maquias	=	1	Alqueire or	1$\frac{1}{20}$	Pecks ,,
4	Alqueires	=	1	Fanga or	6½	,, ,,
15	Fangas	=	1	Moio or	23¼	Bushels ,,

CLOTH MEASURE.

1	Covado	=	26¼	English Inches, or nearly	¾	Yard.
1	Vara	=	43	,, or	1$\frac{7}{35}$	,,

N.B. Woollens, silks, and printed cloths, are sold in Madeira by the Covado; linens, ribbons, and plain cottons, are sold by the Vara.

LONG MEASURE.

12	Linhas	=	1	Polegada or	1.1028	Inches, English.
8	Polegadas	=	1	Palmo or	8.8224	,, ,,
1½	Palmo	=	1	Pe or	13.2336	,, ,,
10	Palmos	=	1	Braça or	2 Yds. 16.224	In. ,,
2,500	Braças	=	1	Legoa or	6,116	Yards ,,
18	Legoas	=	1	Grao or	62 Miles, 968	Yds. ,,
20	Legoas	=	1	Degree, Eng. ... or	69½	Miles ,,

N.B. The Portuguese long measure is seldom used in Madeira; the English scale of feet and inches being generally employed by builders, cabinet-makers, &c.

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List of Duties, including all Custom-house expenses, charged at Madeira, on various Articles imported from England, when not forming part of the Luggage of Passengers arriving, or not having been in use.

COTTON MANUFACTURES.

Articles.		Duty.
Shirtings, plain, ordinary	per lb.	32 reis.
,, middling	,,	45
,, fine	,,	76
,, coloured, or printed cloths	,,	126
Cambrics, ordinary	,,	280
,, fine	,,	379
Muslins, plain, ordinary	,,	126
,, fine	,,	280
,, coloured, or printed, ordinary	,,	280
,, ,, fine	,,	379
Counterpanes	,,	126
Stockings and Hosiery	,,	280

LINEN MANUFACTURES.

Cambrics, in piece or Handkerchiefs	per lb.	3,017 reis.
Diaper, Irish Linen	,,	375 to 550
Holland, &c.	,,	91
Duck, Osnaburgs, &c.	,,	71

SILK MANUFACTURES.

Gros de Naples, Satin, &c.	per lb.	3,017 reis.
Ribbons, Gauze, Crape	,,	4,625
Stockings and other Hosiery	,,	4,813
Bonnets, made up	each	3,142
Caps	,,	1,885

N.B. On all dresses or clothing made up of cotton, linen, or silk, four times the amount of the foregoing duties is charged.

WOOLLEN MANUFACTURES.

Cloths, black or coloured	per lb.	378 reis.
Cassinettes, Serge, Flannel, Ariophane, &c.	,,	315
Blankets	,,	177
Hosiery	,,	378
Carpeting	,,	252

N.B. On all dresses, or under clothing made up of woollens, eight times the amount of the foregoing duties is charged.

LEATHER MANUFACTURES.

Articles.		Duty.
Boots, men's	pair	2,012 reis.
,, women's	,,	1,005
Shoes, Slippers, &c.	,,	502
*Saddles	each	3,821
Reins, Bridles, &c.	per lb.	375

PLATE AND PLATED ARTICLES.

*Plate, manufactured, plain	per lb.	4,833 reis.
* ,, ornamented	,,	10,056
*Plated goods, plain or ornamented	,,	1,132
* ,, gilt	,,	3,142

FURNITURE.

*Arm-chairs, common, straw seats	each	1,260 reis.
* ,, covered in silk	,,	3,066
* ,, mahogany, plain, straw seats	,,	6,837
* ,, covered in silk	,,	11,363

MUSICAL INSTRUMENTS.

*Guitars	each	2,312 reis.
*Harps	,,	32,000
*Piano-fortes, square or oblong	,,	27,000
* ,, upright	,,	45,852
* ,, grand	,,	95,075

PROVISIONS, &c.

Butter	per arroba = 32 lbs.	1,018 reis.
Cheese, Pine or Cheshire	,,	1,217
,, Stilton and Parmasan	,,	2,425
Figs, Raisins, and Dried Fruits	,,	313
Hams, Bacon	,,	955
Bacon	,,	767
Sweetmeats or Preserves	,,	1,018
Candles, Tallow	,,	1,520
,, Stearine or Composite	,,	2,425

MISCELLANEOUS.

Books, unbound		Free
,, bound	per lb.	026 reis.
*Straw Bonnets, Tuscan, with ribbons or flowers	,,	11,313
,, ,, plain	,,	5,656
,, Dunstaple, ornamented	,,	5,028
,, ,, plain	,,	2,514
Hats, felt or silk, for men	,,	1,280
Horses, above 13½ hands	each	15,224
,, 13½ hands, or less	,,	9,290
Mares	,,	3,256

Articles.		Duty.
*Fowling-pieces, double	each	6,083
,, single	,,	4,575
Tin-work ..... per arroba = 32 lbs.	,,	8,056
*Iron-work, polished or bronzed	,,	2,014
*Mathematical and other Instruments	5 per cent.	

N.B. Articles marked * are admitted, when forming part of passengers' luggage, free of duty, on giving bond for their reshipment within eighteen months, or the amount of duty chargeable on them being then paid.

List of Duties charged in England on various Articles imported from Madeira.

Articles.	Duty.
Arrow-root ..... per cwt.	5*s.*
Bananas	5 per cent.
Baskets and Wicker-work ..... ad valorem	10 per cent.
Birds	Free.
Cages, cane-work ..... ad valorem	10 per cent.
Coffee ..... per lb.	6*d.*
Feather-flowers (artificial) ..... ad valorem	25 per cent.
Lace-work ..... ,,	12½ per cent.
Nuts ..... per bushel	2*s.*
Onions ..... ,,	6*d.*
Oranges, in boxes not exceeding 5,000 cub. in. per box	2*s.* 6*d.*
Preserves, dry or moist ..... per lb.	6*d.*
Walking-sticks or Canes ..... ad valorem	10 per cent.
Wine ..... per gallon	5*s.* 6*d.*
Wood-work, Fancy Boxes, &c. ..... ad valorem	10 per cent.

With 5 per cent. additional on the duties levied.
Duties are charged according to the value of goods at the port of importation, and not according to the cost.

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List of Furnished Quintas and Houses usually to be let in and around Funchal.

Under £50 for the Season.

		Ft. above Sea.
Sñr. Pedro Jorge Monteiro's	.....	138
Sñr. Ant. Jozé da Souza	Portas Novas	86
Heirs of J. Ruffino	Santa Luzia	254
Mestre Francisco	Val Formoso	394
Mr. John Payne	Caminho da Torrinha	402
Sñr. Fr. A. da Silva	Angustias	77

From £50 to £75 for the Season.

		Ft. above Sea.
Sñr. Roberto da Costa	Consolaçaõ	516
Sñr. Ricardo Fonseca	Caminho da Torrinha	429
Sñr. J. H. de Freitas	Caminho do Monte	375
Sñr. Luiz S. Anna	Val, Caminho do Monte	311
Sñr. Alex. P. Cunha	Val, Caminho do Monte	323
Sñr. A. Sarsfield	Casa Branca	234
Miss Araujo	Pombal	172
Sñr. H. d'Ornellas	Pombal	145
Sñr. J. Salustiano de Govea	Nora	126
Sñr. Ant. Gomes Camacho	Augustias	164
Mr. J. Johnson	Travessa das Augustias	153
Sñr. F. A. Pestana	Ilheos de Cima	239

From £75 to £100 for the Season.

Sñr. Mathias Figueira	Camº. de Santa Luzia Velha	289
Sñr. Antonio Rabello	Rose Cottage, Caminho do Til.	241
Sñr. Alex. Ferreira	Quinta d'Ambrosio	332
Sñr. Fr. de Andrade	Caminho da Torrinha	262
Sñr. Severino F. de Freitas	Rua das Hortas	93
Sñr. Germano Soares	Quinta das Rosas, Portas Novas	89
Sñr. Ant. Ferreira	Caminho do Meio	146
Sñr. J. Caetano Jardim	Caminho do Meio	200
Sñr. Joaõ Jozé da Camara	Nora Piquena	120
Sñr. Pedro J. Monteiro	Achada	4 8
Sñr. F. Rodº. da Govêa	Rua da Bella vista, Carreira	97
Mr. J. Johnson	Travessa das Augustias	142
Mr. Wm. Grant	Pontinha	18

From £100 to £125 for the Season.

Sñr Joaõ Fr. Nunes	Saltos	494
Sñr. Tristaõ da Camara	Pinheiros	498
Sñr. Fr. de Andrade	Caminho da Torrinha	304
Sñr. F. Placido da Veiga	Levada	494
Sñr. Morgado Vellosa	Val Formoso	281
Sñr. J. F. dos Santos	Val	347
Sñra. J. J. R. d'Oliveira	Val do Meio	298
Sñr. Ant. Jozé	Tangerina, lower Val	277
Dr. Miller	Santa Luzia, Mount-road	262
Sñr. Alex. P. Cunha	Caminho do Meio	202
Sñr. Fr. Jurino	Boa Vista, Caminho do Meio.	385
Sñr. Julio U. Fernandes	Ilheos	123
Sñr. Manoel da Luz	Ilheos	120
Mr. Wm. Newton	Ilheos	119
Sñr. Fr. L. Perreira	Caminho Novo	188

From £125 to £150 for the Season.

Sñr. C. A. Pimenta	Quinta dos Saltos	384
Sñr. Domingos A. da Costa	Caminho da Torrinha	284
Sñr. Candido J. F. Abreu	Val	338
Sñr. Sebastaõ Leal	Mount-road	219

		Ft. above Sea.
Morg. J. F. Florença	Ilheos	119
Sñr. J. A. Bianchi	Ilheos	112
Mr. Wm. Newton	Bella Vista, Ilheos	158
Dr. Coelho	Qa. Virginia, Rua da Princeza	95

From £150 to £200 for the Season.

Sñr. Alex. Ferreira	Upper Ambrosio	368
Mr. Robt. Wallas	Caminho da Torrinha	280
Heirs of late Dr. Renton, per Mr. H. Lundie	Val	315
Mr. J. Payne	Ilheos da Cima	269
Sñr. Luiz Gonsalves	Quinta do Saõ Joaõ	482
Sñr. Fr. da Silva	Cabouqueira	141
Sñr. Fred. Bianchi	Caminho do Palheiro	369

From £200 upwards for the Season.

Mr. Geo. Stoddart	Deanery, Santa Luzia Velha	245
Mr. T. C. Burnett	Levada, Mount-road	503
Sñr. A. J. M. Basto	Ilheos	210
Sñr. J. A. Bianchi	Ilheos	233

The rental of these furnished houses fluctuates considerably, according to the existing demand. They may generally be obtained for a whole year at nearly the same rates as are charged for the season, but are seldom let by the month, unless it be at a late period, or when few visitors arrive.

(O.)—Page 119.

List of Provisions, Groceries, Vegetables, Dry Goods, &c., with their usual Prices in Madeira.

PROVISIONS.

Beef	per lb.	3*d.* to 4*d.*
Mutton	,,	2½*d.* to 4*d.*
Pork	,,	4*d.* to 5*d.*
Veal	,,	3½*d.* to 5*d.*
Bacon	,,	1*s.* 3*d.*
Hams, York	,,	1*s.* 3*d.*
Lard	,,	10*d.*
Butter	,,	1*s.* to 1*s.* 3*d.*
Cheese	,,	1*s.* 3*d.*
Fowls	per couple	2*s.* 1*d.* to 3*s.* 5*d.*
Ducks	,,	2*s.* 1*d.* to 4*s.* 2*d.*
Turkeys	each	6*s.* to 15*s.*
Partridges	per brace	2*s.* 6*d.* to 4*s.* 2*d.*
Pigeons	,,	10*d.* to 1*s.* 3*d.*
Quails	,,	1*s.* to 1*s.* 3*d.*
Woodcocks	,,	2*s.* 6*d.* to 3*s.* 4*d.*
Rabbits	each	4*d.* to 6*d.*

GROCERIES, &c.

Tea	per lb.	5*s*.
,, green	,,	7*s*.
Coffee	,,	7*d*. to 10*d*.
Sugar, crushed	,,	10*d*.
,, moist	,,	3½*d*.
Sago	,,	10*d*.
Arrow-root	,,	5*d*. to 7½*d*.
Rice	,,	2*d*. to 4*d*.
Flour	,,	3*d*.
Raisins, Figs	,,	10*d*.
Currants	,,	10*d*.
Preserves	,,	1*s*. 3*d*.
Pickles	per bottle	2*s*. 6*d*.
Fish and other Sauces	,,	1*s*. 8*d*.
Candles	per lb.	7½*d*.
,, composite	,,	1*s*. 8*d*.
,, wax	,,	3*s*. 4*d*.

Plain and Fancy Bread, &c.

FISH MOST ESTEEMED IN MADEIRA, WITH AVERAGE WEIGHT AND PRICE.

	Usual Weight.	
Abroten	2 to 6 lbs. each	5*d*. to 1*s*. 3*d*.
Alfonsim, costa larga	2 to 6 lbs. ,,	5*d*. to 1*s*. 3*d*.
,, ,, estreita	1 to 2 lbs. ,,	4*d*. to 8*d*.
Anchova	2 to 30 lbs. ,,	5*d*. to 2*s*. 6*d*.
Boca-negra	1 to 2 lbs. ,,	1*d*. to 2*d*.
Bodeam	2 to 4 lbs. ,,	3*d*. to 6*d*.
Bodejo	3 to 10 lbs. ,,	4*d*. to 8*d*.
Boqueirão	1 to 2 oz. 20 for	1*d*.
Carneiro	1 to 3 lbs. each	3*d*. to 6*d*.
Cavalla, *mackerel*	1 to 2 lbs. 5 for	3*d*.
Cherne, species of *Jew-fish*	3 to 30 lbs. per lb.	2*d*. to 4*d*.
Chicharro, *horse-mackerel*	½ lb. each	1*d*.
Coelho	1 to 3 lbs. ,,	3*d*. to 6*d*.
Enchareo	2 to 14 lbs. ,,	5*d*. to 1*s*. 3*d*.
Espada	2 to 8 lbs. ,,	3*d*. to 6*d*.
Gallo, *John Dory*	2 to 4 lbs. ,,	5*d*. to 1*s*. 3*d*.
Garopa, *grouper*	1 to 2 lbs. ,,	1*d*. to 2½*d*.
Goraz	2 to 6 lbs. ,,	5*d*. to 10*d*.
Guelro, *white-bait*	a plate full	5*d*.
Pargo, *braize*	1 to 12 lbs. each	5*d*. to 1*s*. 3*d*.
Raquieme	1 to 2 lbs. ,,	1*d*. to 2½*d*.
Rubaldo	2 to 4 lbs. ,,	5*d*. to 6*d*.
Salmonete, *red mullet*	¼ lb. 5 for	5*d*. to 6*d*.
Id: do alto	2 to 4 lbs. each	1*s*. 3*d*. to 2*s*. 6*d*.
Sardinha, *sardines*	a plate full	5*d*.
Sargo	about 1 lb. each	1*d*. to 1½*d*.
Scifia	about 1 lb. ,,	1*d*. to 1½*d*.
Solha, *flounder*	about 2 oz. 10 for	3*d*. to 5*d*.
Pescada	2 to 16 lbs. each	5*d*. to 1*s*. 3*d*.
Tainha, *grey mullet*	¼ to 10 lbs ,,	½*d*. to 1*s*.
Tartaruga, *turtle*	6 to 50 lbs. ,,	5*d*. to 4*s*.
Camarão, *shrimps*	a plate full	5*d*.

VEGETABLES, &c.

Beans, Broad	per dish	1½d. to 3d.
,, French	,,	2½d. to 5d.
Cabbages	3 to 6 for	5d.
Carrots	per dozen	2½d. to 5d.
Cauliflowers	each	1½d. to 3d.
Chou-chou	per dish	5d.
Cucumbers	each	½d. to 1½d.
Lettuce	per dozen	2½d. to 4d.
Onions	per 100	5d. to 2s. 6d.
Peas, green	per dish	2½d. to 6d.
Potatoes, new	per 32 lbs.	1s. 3d. to 2s. 6d.
,, old	,,	1s. 6d. to 3s.
Pumpkins, old	each	4d. to 8d.
,, green	,,	1d. to 2d.
Radishes	per dish	1d. to 3d.
Tomatoes, large	50 for	7d. to 1s.
Turnips	per dozen	1d. to 3d.

FRUITS, &c.

	In season,		
Apples, table	Sept. to Jan.	50 for	7d. to 2s.
,, baking	,, ,,	,,	5d. to 1s.
Apricots	May to July	30 to 50 for	2½d.
Bananas	The whole year	6 to 10 for	2½d.
Cherries	May to July	per lb.	1d. to 2½d.
Chestnuts	Sept. to Dec.	per 100	2d. to 5d.
Custard Apples	Oct. to Jan.	per dozen	10d. to 2s. 6d.
Figs, various kinds	June to Nov.	50 for	1d. to 5d.
Gooseberries, baking	May to July	per pint	1½d. to 2½d.
Grapes, large table	Sept. to Nov.	per lb.	1d. to 5d.
Guavas	Sept. to March	50 for	2½d. to 5d.
Lemons	The whole year	8 to 12 for	2½d.
Medlars	Oct. to Dec.	50 for	2½d.
Melons	Aug. to Sept.	each	2½d. to 1s. 3d.
Oranges	Oct. to April	50 for	5d. to 1s. 8d.
,, Mandarin	Nov. to Jan.	,,	10d. to 2s. 1d.
Peaches	July to Sept.	10 to 15 for	2½d.
Pears	Aug. to Oct.	50 for	5d. to 7½d.
,, baking	Nov. to Dec.	,,	10d. to 1s.
,, prickly (Cactus)	July to Oct.	,,	1½d. to 4d.
Pine Apples	Sept. to Jan.	each	3s. 4d. to 8s. 4d.
Plums	June to Aug.	50 for	1½d. to 4d.
Strawberries	May to Aug.	per dish	2½d. to 7½d.
Walnuts, green	Aug. to Oct.	50 for	1½d. to 2½d.
,, dry		50 to 80 for	5d.
	or, per alqueire = 1½ peck		2s. 6d. to 3s. 4d.

DRY GOODS, &c.

Cottons—		
Calico, Long cloths, &c.	per vara	6d. to 1s. 8d.
,, Prints	per covado	4d. to 7d.

Cottons, *continued*—		
Muslins, book, mull, &c.	per vara	1*s.* to 3*s.*
,, Printed Dresses	each	7*s.* to 18*s.*
Skirts, corded	,,	1*s.* 8*d.* to 3*s.* 4*d.*
Hose	per pair	10*d.* to 2*s.* 6*d.*
Linens—		
Cambrics, Scotch	per vara	1*s.* 3*d.* to 2*s.* 6*d.*
Drill	,,	2*s* 6*d.* to 5*s.*
Ducks, Russian	,,	1*s.* 3*d.* to 2*s.* 6*d.*
Ginghams	,,	6*d.* to 1*s.*
Irish Linen	,,	3*s.* to 6*s.*
Lawns	,,	1*s.* 10*d.* to 6*s.*
Lace and Edging	,,	6*d.* to 3*s.*
Sheetings	,,	4*s.* 6*d.* to 6*s.*
Towelling	,,	1*s.* 8*d.* to 2*s.*
Silks—		
Gros de Naples	per covado	2*s.* to 5*s.*
Ribbons, bonnet	per vara	7*d.* to 2*s.* 6*d.*
,, gauze	,,	10*d.* to 1*s.* 3*d.*
Gloves, silk	per pair	1*s.* 8*d.* to 3*s.*
Tulle	per covado	1*s.* 3*d.* to 1*s.* 6*d.*
Woollens—		
Balzarine	per covado	8*d.* to 1*s.*
Barèges	,,	8*d.* to 1*s.*
Cloths	,,	12*s.* to 20*s.*
Cobourgs	,,	1*s.* 6*d.* to 3*s.*
Crape	,,	2*s.* 6*d.* to 6*s.*
De Laines	,,	7½*d.* to 1*s.*
Flannels	,,	1*s.* 6*d.* to 3*s.*
Tweed, &c.	,,	4*s.* to 6*s.*
Miscellaneous—		
Straw Bonnets	each	4*s.* to 7*s.* 6*d.*
Kid Gloves	per pair	2*s.* to 3*s.*
Thread Gloves	,,	10*d.* to 1*s.* 3*d.*
Umbrellas, silk	each	12*s.* to 21*s.*

(P.)—Page 140.

Time occupied on Horseback, at a walking pace, or by a Four-oared Boat during favourable weather, in various Excursions over the Island, or along the Coast, of Madeira.

		h.	m.
From Funchal to Boa Ventura, by Torrinhas		7	0
,, Brazen-head		1	0
,, Ditto by boat		0	45
,, Calheta		8	0
,, Ditto, by boat		4	25
,, Camacha		1	35

		h.	m.
From Funchal to	Cama de Lobos	1	30
,,	Ditto, by boat	1	0
,,	Campanario	3	45
,,	Ditto, by boat (to landing-place)	2	30
,,	Canhas	6	0
,,	Ditto, by boat (to landing-place)	3	30
,,	Caniçal, by boat	4	0
,,	Caniço	1	15
,,	Cape Giram, summit	3	15
,,	Ditto, by boat	2	0
,,	Curral das Freiras, by Jardim	3	0
,,	Ditto, view of, by S. Antonio	2	0
,,	Ditto, Church of, by S. Antonio	2	55
,,	Curral dos Romeiros, by Rocket-road and Mount	2	15
,,	Ditto, by Palheiro to Mount	2	45
,,	Encumiada de Saõ Viçente	5	45
,,	Fayal, by Mount	5	0
,,	Jardim da Serra	2	30
,,	Lamaceiros	4	0
,,	Machico	4	0
,,	Ditto, by boat	3	0
,,	Magdalena	6	30
,,	Ditto, by boat	4	0
,,	Mount Church	0	40
,,	Palheiro do Ferreiro	1	0
,,	Ponta do Sol	5	30
,,	Ditto, by boat	3	30
,,	Porto da Cruz, via Lamaceiros	5	0
,,	Ribeira Brava	4	15
,,	Ribeira Frio	3	0
,,	Sant' Anna	6	30
,,	Sant' Antonio and Sant' Amaro	1	30
,,	Sant' Antonio da Serra	3	30
,,	Santa Cruz	3	0
,,	Ditto, by boat	2	0
,,	Saõ Jorge, via Sant' Anna	8	0
,,	Saõ Roque, and round by S. Amaro	1	45
,,	Saõ Viçente	7	30
,,	Torrinhas, via Curral	4	15
From Sant' Anna to	Arco de Saõ Jorge	2	45
,,	Boa Ventura	3	30
,,	Fayal	1	35
,,	Machico {via Lamaceiros	6	20
	Machico {via Portella	5	35
,,	Pico Ruivo, summit	3	30
,,	Ponta Delgada	4	0
,,	Porto da Cruz	3	10
,,	Ribeiro Frio	3	20
,,	Sant' Antonio da Serra {via Lamaceiros	5	0
	Sant' Antonio da Serra {via Feiteiras	5	45
,,	Saõ Jorge	1	30
,,	Saõ Viçente	5	45

	h.	m.
From Boa Ventura to Torrinhas, summit	3	0
,, Curral Church	4	15
,, Funchal, via Curral	7	15
From Saõ Jorge to Arco de Saõ Jorge	1	15
,, Boa Ventura	2	0
,, Sant' Anna	1	30
,, Ponta Delgada	2	30
,, Saõ Viçente	4	15
,, Voltas (for viewing scenery)	1	30
From Machico to Caniçal, by boat, N. S. da Piedade	1	0
,, Santa Cruz	1	0
,, Ditto, by boat	0	45
,, Sant' Antonio da Serra	1	20
,, Portella	1	45
From Sant' Antonio da Serra to Santa Cruz, direct	1	30
,, ,, Lamaceiros	0	50
,, ,, Portella, via Lamaceiros	1	20
,, ,, Porto da Cruz, via Lamaceiros	1	30
From Calheta to Fajã da Ovelha	3	0
,, Paül da Serra and Rabaçal	2	45
,, Paül do Mar	4	0
,, Ponta do Pargo	5	0
From Saõ Viçente (from hotel) to Calheta	7	0
,, ,, Paül da Serra (ascent)	2	0
,, ,, Ponta Delgada	1	45
,, ,, Rabaçal	1	30
,, ,, Sant' Anna	5	45
,, ,, Saõ Jorge	4	15
,, ,, Seiçal, by boat	1	0
,, ,, Boã Ventura	2	15

Persons travelling in hammocks will find, by adding 15 minutes to every hour of the time occupied in performing the journeys on horseback, the average period required for performing the same journeys in a hammock.

Altitude of various Mountains and Heights in Madeira.

		Altitude in English Feet.
Camacha Church	A.	2,203
Caniçal Fossil Bed	A.	254
,, N. S. da Piedade	A.	342
Cape Giram	V.	1,934
Curral, bed of	B.	2,080
,, depth from above Jardim da Serra	B.	1,634
Jardim da Serra	B.	2,526
Lamaceiros Pass	A.	2,181
Mirante, vista de Machico	A.	1,768
Mount Church	V.	1,965
Palheiro	V.	1,800

		Altitude in English Feet.
Paül da Serra	v.	4,611
Penha d'Aguia	v.	1,915
Pico do Arco	v.	2,746
,, do Ariciro	v.	5,893
,, do Arrebentaõ	v.	3,844
,, das Bodes	v.	5,725
,, do Canario	v.	5,449
,, do Castanho	v.	1,998
,, da Cruz	v.	3,071
,, do Facho, Machico	v.	1,080
,, Grande	v.	5,391
,, da Lagoa	v.	4,762
,, da Neve, Ice-house	v.	5,346
,, da Ursa	v.	4,611
,, Ruivo	v.	6,050
,, S. Antonio	v.	5,706
,, do Sidraõ	v.	5,500
,, das Torrinhas	v.	5,980
Portella, Pass	A.	1,799
Roxtolho Moreira, N. of Machico	v.	2,510
Sant' Anna Hotel	v.	1,090
Sant' Antonio Church	A.	941
Sant' Antonio da Serra	A.	2,059
Sant' Antonio da Serra, edge of Lagoa	A.	2,289
Saõ Roque Church	A.	1,129

The altitudes marked A. are ascertained by an Aneroid barometer.
Those marked B. are from Bowdich's Observations.
Those marked V. are taken by Captains Vidal and Azevedo.

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